JUNE • 1961

FIREMEN

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Gentle Rescue — *see page 7*

IONAL FIRE
TECTION
OCIATION

66th
year

INADEQUATE EXITWAYS — BANE OF SUPERMARKETS - - - - - - - - - page 8

ATTACHMENT OF COUPLINGS - - - - page 14

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Ample pressure for fog gun operation. Fights fires "on the move".

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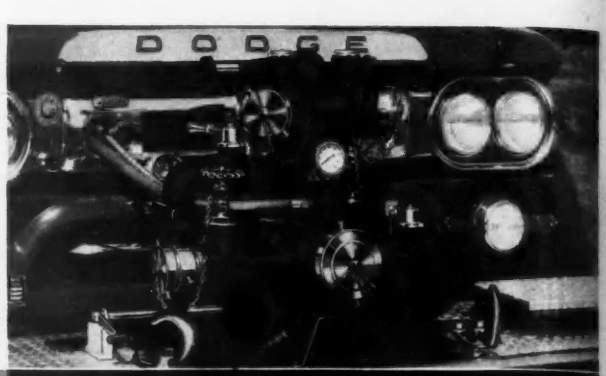

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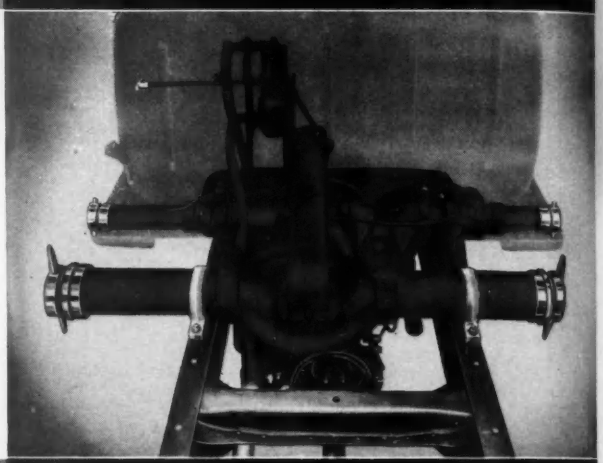

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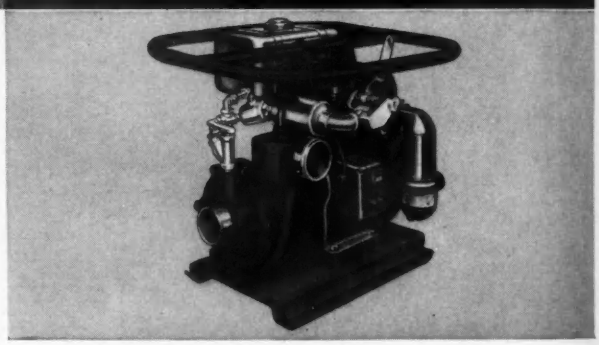

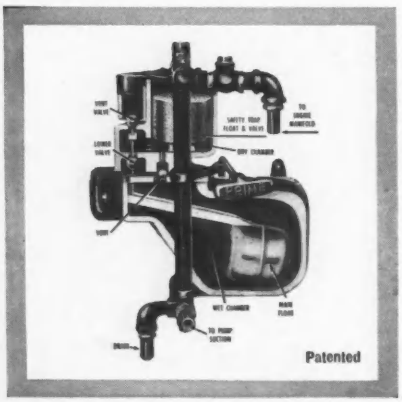

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HERE ARE SOME OF THE FEATURES:

100 amp. Leece Neville Alternator and 1200 watt DC transformer provide current for emergency and flood lighting equipment. Portable generator and pump are housed in exterior compartments. 30,000 BTU hot water heating system keeps rear compartment comfortable in coldest weather. Body is equipped with three 6-inch flasher lights front and two rear. Spot lights are mounted at each corner; twin Federal Sirens are front fender mounted. Chassis is GMC Model 454.

Highly functional emergency-rescue unit for Hill-Top Hose Company, Natrona Heights, Pa., does its job efficiently...looks the part, too!

In this well-planned unit, all-weather comfort and convenience was achieved with a sliding-top canopy. In warm weather operation it converts to an open type vehicle by sliding the rear canopy forward and removing the wide rear doors. In either position windows match up for good appearance and ventilation.

Foam rubber cushions down both sides provide seating space for a large crew and doubles as cot space for stretcher patients. Ample storage space is provided inside for first aid equipment, exterior compartments house a wide variety of rescue equipment.

Because fire-rescue requirements vary greatly from community to community, it pays to take advantage of the best experience available when you plan *your* emergency-rescue vehicle. An experienced Gerstenslager representative is nearby, ready to help you.

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The hose will blow before the coupling will go!

Drop-forged under the tremendous force of hydraulic presses, Akron Rocker-Ring and Forgex couplings give you greater density, strength and toughness . . . the trouble-free service you're looking for.

Two models for you: the lightweight, three-lug Forgex, and the heavy-duty two-lug Rocker-Ring ...both guaranteed to give you complete satisfaction.

Brass—reinforced with manganese—drop-forged Rocker-Ring for added protection to threads and swivel—for added strength in the hose bowls

Tapered hose bowl holds hose in vise-like grip—no slipping at any pressure

High pressure—the hose will blow before the coupling will go

Threads—any 2½" and 1½" threads

Hose—fit all fire hose

Higbee thread and indicators

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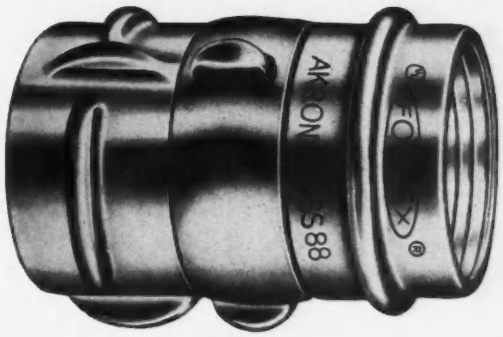
— FORGEX® ROCKER-RING 3-Lug Coupling. Forgex comes in the smaller hose bowl sizes, perfectly tailored for the new lightweight hoses. A lightweight, tough, three-lug, drop-forged coupling for use on all 1½" or 2½" fire hose—dacron or cotton—any thread. Satin finish. Brass with manganese.

— ROCKER-RING® 2-Lug Coupling. The heavy-duty drop-forged coupling for departments that want the best where service is the toughest. Satin finish. Brass with manganese.

Style	Size	Rockerlugs	Length	Weight Lbs.
88	1½"	3	4½"	2⅜
88	2½"	3	5½"	4½
92	1½"	2	4½"	2¾
92	2½"	2	5¾"	6⅛

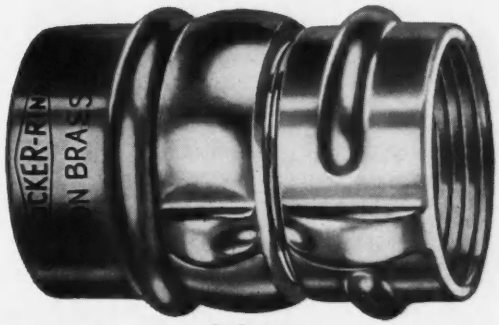
See New Akron Brass Catalog 60—Page 62

FORGEX®



Style 88

ROCKER-RING®



Style 92

AKRON BRASS
FIRE FIGHTING EQUIPMENT

AKRON BRASS MFG. COMPANY, INC.
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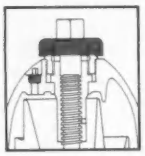

The large, bronze weather cap used on all Mueller AWWA Improved Fire Hydrants completely covers vital hydrant parts and greatly discourages tampering. Because of its simple, circular design, it is extremely difficult to remove with any common tool. Yet it can be quickly and easily removed, when necessary, with the special Mueller operating wrench that is furnished with the hydrant. Determined vandals can make a hydrant useless by simply removing the hold-down nut . . . or even the operating nut itself. These parts are completely covered by this bronze, weather cap. The weather cap also keeps water out of the hydrant bonnet which prevents ice locking of the operating nut.

Remember . . . *just one fire hydrant that does not function when needed will disrupt your entire fire protection network!*

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FIREMEN

Volume 28 Number 6

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

FIREMEN magazine is available only through membership in the NFPA. Complete details on membership can be obtained by writing to the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Highlights of this Issue

	Page
Inadequate Exitways — Bane of the Supermarkets	8
Regional Round-Up	10
Attachment of Couplings	14
Swimming Pool Fires	16
Manual for Volunteers	17
Firemen's Training in the Months Ahead	24
Fire Service Meetings	26
This Month's News and New Products	28
Buying New Equipment?	28
Index to Advertisers	28

Someday, a sculptor or painter will create a memorial to a fire fighter merely by depicting a pair of hands. The hands will be ordinary, perhaps with blunt or broken fingernails, scarred a little, cracked, with a few smooth spots where hot embers or burning chemicals have seared the pores into smoothness. But the design may be complicated.

The person who studies the sculpture or painting will have to imagine those hands in action in countless tasks performed through most of a fireman's lifetime — grasping a hose, pulling a pike pole, gripping an axe, tugging on bunker clothes, hauling off boots, turning a wheel, pulling a throttle, twisting a hydrant wrench, waving for water, holding a ladder, fixing a toy, writing, turning a page, accepting an award, ty ng a rope, rubbing a youngster's head, reaching to rescue a person, dragging a fire victim, picking up a stretcher or sack, pulling someone or something out of water, tightening the straps on a gas mask, sliding an aspirator into the mouth of an unconscious person, fingering for a tongue in a blocked throat, unscrewing a fuse, squeezing a forearm to stop the flow of blood, scratching for a splinter, carrying a spanner — the occupations of a fireman's hands are infinite in number.

And the sculptor or artist should not overlook the type of action shown on this month's cover (*Wide World photo*). This incident occurred in Lawton, Oklahoma, in April. Firemen responded to a dwelling fire and, while taking care of the blaze, discovered five tiny Siamese kittens overcome by the smoke. The mother cat had died but the men diligently worked to save the kittens, applying artificial respiration as gently and effectively as possible.

According to reports, the kittens lived. To some, especially to those who have no use for cats or kittens, the incident was trivial, not worth illustrating or reporting. A thing to consider, though, is that the hands were capable, as a fireman's hands are expected to be.

The 65th Annual Meeting in Detroit attracted 1,342 NFPA members and guests, and developed into one of the most interesting and active meetings held by the Association. Every session drew excellent attendance, including the final session on Friday morning which held a capacity audience until adjournment at noontime.

A special insert showing featured speakers and highlights of the Annual Meeting is included with this issue. Note particularly the audience photos, which give evidence of the interest in the discussions and proceedings of the meeting. Participation from "the floor," especially during the presentation of technical standards for adoption, was vigorous.

If you have not taken part in an NFPA meeting, you have missed one of the most important and enjoyable functions of the Association. So, the invitation is extended to you, now, to attend the next NFPA meeting. The Fall Conference is scheduled to be held at the Hotel President, Kansas City, Missouri, October 30 to November 1, this year. Plan to be there.

One of the necessary but difficult chores for the NFPA Executive Office is the mailing of publications to thousands of persons who request them. Last year, for example, more than 10 million pieces of literature pertaining to all aspects of fire protection and fire prevention were mailed to NFPA members as well as to non-members.

Therefore, when any person or fire department asks for publications from the Association, it is of primary importance that the correct mailing address be submitted. This pertains also to members who regularly receive publications and to subscribers to FIREMEN magazine. The U. S. Post Office has requested that postal zone numbers be included on all mail, whenever possible, and that address changes be corrected quickly.

So, if you change your address during the membership year, please notify the NFPA Executive Office, and include the postal zone number with your address if it is applicable.

WARREN Y. KIMBALL, Managing Editor; PAUL R. LYONS, Editor; HENRY S. GERE, Advertising Manager; ROWENA D. DORES, Editorial Assistant; SHIRLEY TOBEY, Fire Service Department; VIRGINIA STILES, Advertising Department.

INADEQUATE EXITWAYS—

Bane of the Supermarkets

by J. W. Britton, Chief of the Bureau of Fire Prevention
Charleston Fire Department, Charleston, West Virginia

DURING the past twenty years, the corner grocery has grown up. It has become the huge, sprawling commodity center that we call the supermarket. The corner grocery had an inventory of perhaps two hundred different items. The supermarket boasts an inventory twenty times larger, and dispenses goods and services of many types. This has created the problem of expansive markets whose facilities are, more often than not, too inadequate to take care of the multitudes shopping there. All too often, insufficient means of egress is provided for the customers patronizing such markets.

Usually the supermarket is a large structure made of brick, glass, steel, aluminum and concrete, with pastel hued walls and every shopping convenience man's ingenuity can develop. But, usually the only means of egress is from the front or corner of the building through single or double aluminum and glass doors activated by air pads or other similar devices. True, there may be a half dozen other doors to the outside from the utility areas but these cannot be considered as prime exitways because of improper design and because they are concealed from the public's view by the wall between the service and sales areas.

Even if a considerable portion of the market's customers could get to these doors, the doors might be obstructed by merchandise, or barred and locked.

The main exit is likely to be obstructed by buggies and various arrangements of check-out stands and turnstiles commonly provided to control the travel of customers, without thought of the need for quick escape in time of fire emergency.

Such a situation is aggravated by the fact that the utility areas, where most of these so-called exitways are situated, are the areas where fire is the most likely to occur (*see box — Ed.*). All these things being so, it cannot be argued logically that doors in these areas, no matter how good, nor how numerous, will give much help for evacuating the building in time of distress. Too many persons make this error. Building inspectors generally concern themselves more with the number of exitways than with the location, design, hardware and function of such exitways. And an architect may be reluctant to mar the symmetry of his building design by providing exitways in the right places, particularly since the owner of the building wants all the sales space he can get for the money he proposes to spend.

This then is the problem: existing supermarkets without adequate means of egress and new supermarkets being built with the same deficiencies, compounded by the proclivity to panic inherent in such structures.

When there are five or six hundred people in a one-room structure (the sales area of a supermarket) with only one visible means of exit, you have the potential for panic. And remember this: it doesn't require an actual fire to cause a panic . . . a false cry of fire can do the trick. In October, 1960, in Bogota, Colombia, a false fire alarm in a small movie theatre resulted in a stampede that killed five persons and injured fifty others. What happened there could happen in any supermarket because all the factors are present: large numbers of people, too few, safe exitways, display counter obstructions to flow of traffic, combustible interior furnishings and a public and managerial unawareness of the factors involved.

There is only one answer to this problem . . . exitways,

Approved illuminating exit sign above main exitway of supermarket. This exit is used for normal traffic from market interior. In case of fire or other emergencies, customers should have clearly visible directions to the quickest way out of the building.

Illuminating directional sign especially designed for supermarkets. Its size and design make for good legibility against a background of promotional colors and vividly hued walls.

Approved emergency exitway from supermarket, properly designated and equipped with alarm feature for the protection of the management against pilferage. This type of exitway can be designed for double doors if the size of the building warrants.

PLACE OF ORIGIN OF SUPERMARKET FIRES

Based on a study of 100 reports of supermarket fires in Occupancy Fire Records FR 54-2

ORIGIN OF FIRES	
Service Area	78
Stockroom	24
Refrigeration Equipment Room	15
Incinerator	4
Boiler or Furnace Room	3
Office	3
Other	8
Unknown	21
Sales Area	11
Attic	5
Exposure	4
Unknown	2
Total	100

adequate in number and properly situated, with conspicuous directional and exit signs, must be made a part of all supermarkets. Several fundamentals must be accepted by all persons concerned if these objectives are to be attained. These are as follows:

(1) Exitways from any part of the market other than the sales area are worthless as evacuation points for use by the general public.

(2) Directional and exit signs, to and above exitways, must be made as conspicuous as possible, because such signs will be in competition with sales and promotional banners of all types. Conventional signs of the type now generally accepted and in use will not suffice. They are too small, and they fail to get the message across.

While the word "Exit" is suitable for the conventional exitway normally used for outgoing traffic, the words "Emergency Exit" should be posted above the means of emergency egress, else the public will fail to appreciate the purpose of the emergency exitway, when and if the unexpected happens. People are creatures of habit. The same ones tend to patronize the same store again and again, hence their continual subjection to the

This directional sign, 4 feet long by approximately 1 foot high, is in a Charleston supermarket and points to a double door emergency exitway to the outside. Its colors are green and white and its illumination comes from fluorescent tubes.

properly designed and situated exit signs, over a period of time, will probably impress upon their subconscious minds, the location of the emergency exitways. If a disaster does happen, their movements may be less hesitant; result . . . a reasonably safe and orderly exit from the threatened building. Also, if conspicuous signs are provided, "first time" customers will have less difficulty finding the proper exitways and therefore will be able to get out more quickly.

(3) An all-out crash program by the fire service to correct the exit deficiencies inherent in existing supermarkets throughout the country.

(4) Cooperative liaison between architects, building inspectors and the fire service, to solve the evacuation problems of the supermarkets before they are erected.

(*Continued on page 21*)

EXCERPT FROM NFPA STANDARD No. 101 — BUILDING EXITS CODE

SECTION 53. EXIT SIGNS

5301. All required exits and the ways of access thereto shall be identified by readily visible signs in all cases where the exit or way to reach it is not immediately obvious to the occupants, and in any case where required by the applicable provisions of Chapter II.

5302. Any doors, passageways or stairways which are not exits or ways to reach exits, and which are so located or arranged as to be likely to be mistaken for exits, shall be identified by signs reading "NOT AN EXIT" or similar designation, or shall be identified by signs indicating their actual character, such as "TO BASEMENT," "STOREROOM," "LINEN CLOSET" or the like.

5303. All required signs designating exits or ways to reach exits shall be so located and of such size, color and design as to be readily visible. No decorations, furnishings or equipment which impair visibility of signs shall be permitted, nor shall there be any brightly illuminated sign (for other than exit purposes), display or object in or near the line of vision to the required exit sign of such a character as to so detract attention from the exit sign that it may not be noticed.

5304. All exit signs shall be distinctive in color and shall provide contrast with decorations, interior finish or other signs.

5305. Signs reading "TO EXIT," "TO STAIRWAY" or similar designation with an arrow indicating the direction shall be placed in locations where the direction of travel to reach the nearest exit is not immediately apparent, and near all elevators or escalators (not so arranged as to qualify as required exits) where in event of fire, persons accustomed to use only the elevators or escalators would have to use a stairway or other alternate exit, unless such stairway or alternate exit is near enough so that the way to reach it is unmistakable.

SIZE OF SIGNS

5321. All externally illuminated signs shall have the word "EXIT" in plainly legible letters not less than 6 inches high, with the principal strokes of letters not less than ¾ inches wide.

5322. All internally illuminated signs shall have the word "EXIT" in plainly legible letters not less than 4½ inches high, and in large places of assembly, not less than 6 inches high.

REGIONAL ROUND-UP

A spot check of progress and plans of NFPA member fire departments and other fire service organizations in various regions.

FROM *Wichita*, Chief T. A. McGaughey reports that his department has added two new 1,250 gpm F.W.D. pumpers to replace two 1,000 gpm pumpers in the high value district. Growth and reorganization of the fire department will depend on proposed annexation, which would double the present 53 square mile area of the city. Under a Capitol Improvement Program ten new fire stations have been approved, which would double fire department personnel within the next six years. To date, four station sites have been purchased.

The *Atchison*, Kansas, Fire Department, headed by Chief J. G. Anslinger has had good results with fire prevention demonstrations, reports Director of Public Safety M. A. Wood. Equipment for the demonstration was developed by Laverne Stucker, former institutional fire chief at the Kansas Children's Home. He and Chief Anslinger have given the demonstrations to 24,000 people in various civic and community groups.

In addition, the department had added a new 1,000 gpm pumper with six 2½-inch outlets and a divided hose bed for 2,400 feet (three lines) of 2½-inch hose.

The Fire Department in Pittsburg, Kansas, dates back to 1886, but now, under the direction of Chief Elmer C. Fields, it has grown to 25 men with a headquarters station and two substations. Recently, a municipal building was remodeled to provide larger, newer, headquarters facilities, with apparatus room on the first floor and recreation and training room, dormitory, kitchen and locker room on the second floor, all air-conditioned. The station has three electrically operated overhead doors and houses a chief's station wagon, a 1960 International 1,000 gpm pumper, a 1951 Mack 500 gpm pumper and a Pirsch "quad." Stations 2 and 3 have a 1942 Mack 750 gpm pumper and a 1958 International 1,000 gpm pumper respectively. Last year the fire department won a Certificate of Merit for First Place among Kansas entries submitted to the NFPA Fire Prevention Contest. Pittsburg has received this award four consecutive years.

Old fire bell, cast in 1886, stands on marble platform in front of Pittsburg Fire Department Headquarters. It weighs about 970 pounds.

Chief Anslinger and Laverne Stucker with fire prevention equipment used by Atchison, Kansas, Fire Department.

From *Topeka*, Kansas, Chief Deputy State Fire Marshal Walter McClanahan reports that the Governor's Fourth Annual Fire Prevention Conference will be held this year at *Wichita*. He also states that new rules and regulations were recently adopted concerning the storage, handling and use of flammable liquid at bulk oil stations and service stations. This included pertinent sections from NFPA Standard No. 30.

From *Lawrence*, Kansas, Edgar M. Munday, Chief Firemanship Instructor at the University of Kansas, reports that more than 1,600 firemen receive instruction annually under the state firemanship training program. Traveling instructors use station wagons to carry various tools and appliances to various paid and volunteer fire departments throughout the state. Daytime classes are held for paid fire departments and evening classes for the volunteers five nights a week. These instructors also assist fire chiefs in making inspections and giving fire prevention demonstrations and lectures. The Kansas fire school is scheduled to be held in October this year.

Chief Elvin E. Warhurst, of *Newton*, Kansas, reports that members of his department have given a great deal of attention to hose loading and layout. Last

year, when a new 85-foot aerial ladder was delivered, a 1949 quad with a 750 gpm pump was converted by building a new body with a 400 gallon water tank. The hose bed was changed to provide a three-way split load of 2½-inch hose, each compartment holding 800 feet. Each compartment is loaded for laying from fire to hydrant. The left compartment is connected to a skid of two 150-foot lines of 1½-inch hose with fog nozzles; the middle compartment is finished off with a 100-foot skid of 2½-inch hose with an open butt coupling. This can be connected to a heavy stream appliance or a hand line nozzle; the right compartment is finished off with a 100-foot skid of 2½-inch hose with a 2½-inch fog nozzle attached.

Here's what Chief Warhurst says about the hose load:

This hose body permits hose load and layout procedures suitable for a single line wyed into two 1½-inch lines for dwelling fires, up to a triple line layout for master stream appliances that can utilize the full capacity of the pumper. On any layout, the pumper need only make a single trip from the fire to the hydrant. To speed these operations, the pumper is equipped with a valved front suction and preconnected 4½-inch soft suction hose, thereby providing a one-man operation in connecting the pumper to the hydrant.

The load in each of the compartments may be used independently or in any combinations. If three 2½-inch lines are desired to supply a heavy stream appliance, it is only necessary that the 1½-inch skid and the 2½-inch nozzle be disconnected from the 2½-inch hose lines, then all three 2½-inch lines are connected to the desired appliance.

An easily accessible coupling is at the bottom of the left hose compartment to provide a rapid means of connecting the left and middle compartments of hose loads together, permitting a 1,600-foot single line in the event a situation is encountered requiring over 800 feet of hose.

A tough problem for the Division of Forestry in the Minnesota Department of Conservation is created by 1¼ million acres of non-forest sedge and marsh lands intermingled with the 16¾ million acres of forest lands under protection. So reports Don Wilson, in charge of Forest Fire Control, who assists E. L. Lawson, Director of the Minnesota Division of Forestry. Boggy conditions and flash fuels in these lowland marsh areas prevent conventional fire fighting equipment from reaching many positions to establish fire lines. It is also dangerous to attempt direct action by fire fighters with hand tools because of the possible rapid spread of such fires.

Lately the Division has been trying a Canadian manufactured vehicle called a "bombardier." Powered by a 125 horsepower Chrysler motor, this vehicle has two endless rubber and rayon tracks with lugs 29 inches wide running over pneumatic tires. It exerts less than 1 pound per square inch of ground pressure. Two 150-gallon water tanks are mounted directly over the tracks and a portable pump supplies 100 feet of 1-inch rubber hose kept "live" on a hose reel. By using a fog nozzle and moving this vehicle along the fire line, fast and effective control of marsh land fires has been accomplished. Fire fighters follow the vehicle using the six back-pack pumps, shovels and axes which it carries. The bombardier also has a winch for pull-out when the vehicle becomes stalled or mired.

Hose load of converted "quad" in Newton, Kansas.

For the second year the Division of Forestry is using a Navy TBM aircraft and fire-retardant chemical as initial attack on fires within a radius of 35 miles from one airport. The plane carries 600 gallons of slurry in two tanks, each of which can be jettisoned individually. Drops are made from an altitude of 50 to 75 feet and each drop of 300 gallons will cover a strip 500 feet long. Aerial drops are generally tried for holding action rather than complete fire suppression.

Word from Fire Chief Frank E. Oberg, of *St. Paul*, is that his fire department recently benefited by a new charter provision obtained by referendum which allows $50,000 annually for purchase of equipment. This budget item is separate from the regular fire department budget and unexpended funds can be accumulated.

The fire department is still receiving a lot of attention nation-wide for its training program on artificial respiration for laryngectomies. (See FIREMEN for May 1960.) This was prepared by Training Division Chief Reuben Schmugge. Latest addition to the training manual is a set of lessons on public relations, including a briefing on treatment of visitors to fire stations. St. Paul's fire companies are making in-service commercial inspections with special forms listing names, characteristics and locations of hazardous substances. Forms are left with the building occupant following the inspection and are sent by him to fire headquarters, subsequently released to each fire company.

The fire department is also proceeding with instruction of rescue squad men in closed chest heart massage and other resuscitation techniques, with emphasis on pulmonary edema, pulmonary emphysema, asthma, and other diseases which require departures from the regular procedures. The Ramsey County Medical Association has delegated Dr. Morris B. Johnson and Oxygen Therapist Donald Livingston to advise and instruct department personnel in a 16-hour course.

Chief Oberg is also pleased with the support of the newly organized "Pioneer Hook and Ladder Volunteers," a civic group comprised of business, professional and labor leaders. It was organized for the express purpose of lending assistance to the fire department in its program of reaching the public. Sample items: the Pioneers were instrumental in providing 70,000 brochures on fire department needs, sent to voters by direct mail. The group also took an active part in St. Paul's Winter Carnival, and presently its members are conducting a public drive to provide libraries for the 20 fire stations.

E. L. Weber, Assistant Commissioner, State Fire Marshal Department, reports that his department is in the process of rewriting laws and regulations on flammable liquids, gases and explosives. Included in some of the prospective changes are the adoption of recommendations of NFPA Standard No. 58 — *Storage and Handling of Liquefied Petroleum Gases* as well as additional state requirements. Last year, members of the State Fire Marshal's office inspected 6,466 buildings, reviewed 850 plans for architects and communities.

Minnesota has three itinerant firemanship instructors who last year taught a basic course to 82 fire departments. Each department receives 20 hours of instruction. Plans call for the establishment of regional and area vocational schools in this training program. Eventually, at least nine part-time instructors are anticipated for the staff.

The Tenth Annual Minnesota Fire School, held at the University of Minnesota in St. Paul, attracted 370 firemen, a record enrollment for the course.

From *Sioux Falls*, Chief Burdette Sheldon reports that his department has revamped the pre-fire planning program. Focus will be on target areas such as schools, colleges, churches, hospitals and convalescent homes. Along about September of this year, the department expects to receive a new American LaFrance 85-foot all-steel aerial ladder with enclosed cab and a 1,000 gpm pump.

Chief Howard Frick, of *Yankton*, states that his department recently acquired a new "quad" at a cost of approximately $45,000.

New Commissioner of Insurance and State Fire Marshal of South Dakota is Robert A. Hurlbut. His appointment by Governor Gubbrud was confirmed by the State Senate and became effective January 10, 1961. Most of his deputy fire marshals are former chief officers who have received special training in inspection, arson investigation and instruction. Four station wagons used by the Fire Marshal's Office are fire department red with gold and black decals on the side. Fire service years of five of these former chiefs total 127. Bob Hurlbut says that in the future such high qualifications will be maintained for new or replacement marshals. His deputy assistant is W. R. "Bill" Walker.

Also assisting Fire Marshal Hurlbut is V. L. Crusinberry, former chief of the Sioux Falls Fire Department. He has stepped up the state firemen's training program and a standard training course soon will be available to all South Dakota firemen. One three-day training school was in Parker in April; others are scheduled up to August.

At its last session, the South Dakota Legislature made it lawful for townships to enter into a contract with a fire department for fire protection service. Taking advantage of this law, the *Trent* Volunteer Fire Department now has most of its rural area covered by contract on a township basis. This permits the department, headed by Chief L. K. Mutschelknaus, to do some long-range planning and add more equipment.

The past year has been busy for the fire department in *Rapid City*. In September, 1960, a new FWD 1,000 gpm pumper was put into service. The following month the department added a 1,000 gpm International (both pumpers triple combination), and hired twelve new firemen. In November a new sub-station was opened in the southern part of the city and the department changed from two-platoon to three-platoon.

New FWD 1,000 gpm pumper in Rapid City, South Dakota.

Following the recent adoption of a fire prevention code, a Bureau of Fire Prevention was adopted April 17, 1961, started officially May 11. Looking ahead, Chief Richard Kiefer expects a new sub-station in the northern part of the city and plans to set up a home fire inspection program.

The Black Hills Fire Protection District encompasses nearly all of this timbered area in South Dakota, reports Gerald J. O'Neil for State Forester Robert J. Arkins. Fire occurrence is heavy, with fires spread rather evenly throughout the year. Because of this high fire hazard situation, the approximately 2½-million acres of ponderosa pine forest are protected from fire by cooperative agreement between the South Dakota Department of Game, Fish and Parks; U.S. Forest Service; U.S. Park Service and the U.S. Bureau of Land Management.

The effectiveness of this cooperative effort was illustrated last year when a severe lightning storm started 28 forest fires, three of which required participation of all cooperating agencies.

Other benefits of the agreement include financial and material aid from the State Forester to the six counties that make up the fire protection district. The State Forester acquires military surplus equipment and donates it to the various counties, which assign it to local fire departments. There are 26 organized volunteer fire departments in the district that participate in the program, and direct purchase of equipment by state, county and local fire departments has helped to round out each unit's equipment.

From *Bismarck*, Deputy Fire Marshal Vance Arneson reports that there are now at least 446 fire departments in his state, of which 107 are rural fire departments. Latest count also shows 8,168 volunteer firemen in the state.

Legislative changes made recently included a complete new code for school construction, an amendment in the law applying to liquefied petroleum gas (basically the recommendations of the NFPA Standard No. 58), a new "heart" law to allow paid firemen to receive workmen's compensation in cases of heart ailments and hypertension, and changes in the rural fire district law. The latter allows the secretary-treasurer of a fire district to collect tax money direct from the county auditor and also allows unorganized townships to contract with the fire protection district. In North Dakota

rural fire protection districts, a tax levy up to 5 mills is allowed for fire protection purposes.

A recent Fire Officers' Training School held in *Jamestown* in March had a registration of about 300. The Jamestown Fire Department put on a fire rescue demonstration that was well received. The department, headed by Chief Percy Wellman, also demonstrated a special underwater recovery evolution. Fire department personnel, with four members of the Mid-Continent Divers Association, a local SCUBA rescue unit, recovered an automobile with several simulated victims. Several divers are members of the department, and Chief Wellman feels that they are in time going to be relied upon to handle the majority of drowning accident recovery problems.

J. K. Eckes, Executive Secretary of the North Dakota Firemen's Association, reports that "sub-regional" firemen's training schools have been very effective in the last couple of years. These are two-hour or three-hour schools held for five to ten fire departments. Purpose of the schools is to train fire officers or fire fighters who, in turn, can return to their department and pass on the training information. Only one to three topics are covered during each school.

Fire Chief Gilbert C. Malek, of *Minot*, reports that his department is adding a crash fire truck this Spring. An airport for jet aircraft is located eleven miles north of Minot and air traffic has increased approximately eightfold during the past four years at the Minot Municipal Airport. The crash truck was scheduled for delivery in May. The fire department also hopes to add a new rescue truck at a cost of about $15,000. In 1957 Minot built a new fire station, now plans construction of a new sub-station to be built some time this year.

On May 1 the department launched its home inspection program with fire fighters conducting in-service inspections with radio-equipped apparatus.

Duane L. Green, Deputy State Forester, North Dakota Forest Service, reports that last Fall high frequency radio was installed in the Turtle Mountain District. Radio is now used in the patrol cars, tanker unit and to contact aircraft when necessary. An automatic repeater station in one of the fire watch towers helps to provide excellent radio coverage. Within the district, hand tools are primarily used for fire suppression together with a small mobile tanker unit. Cooperative fire agreements have recently been signed with the Bureau of Indian Affairs and another agreement is contemplated with the Manitoba Forest Service.

In *Lincoln*, Chief Roscoe A. Benton has started a new evaluation and grading system for promotional purposes (*More on this later — Ed.*). Last year, eight men were added to the department and the Training Division launched a new program. Drills were held at several buildings being razed in the downtown area, and recruits and regular fire fighters had opportunity to practice special evolutions. Lincoln's Fire Prevention Bureau received two new radio-equipped sedans donated by the Independent Insurance Agents of Lincoln.

In the past ten years the population of the city has grown by 30,000. In 1954 the department added a new fire station and a combination 1,000 gpm pumper–100-foot aerial ladder. Three years later another station was added with a 750 gpm pumper assigned. Last year a new 1,500 gpm American LaFrance pumper was put in service at the headquarters station. Another station, to be relocated near the eastern edge of the original city limits, is scheduled to be built next year.

Sedans donated to the Lincoln, Nebraska, Fire Prevention Bureau.

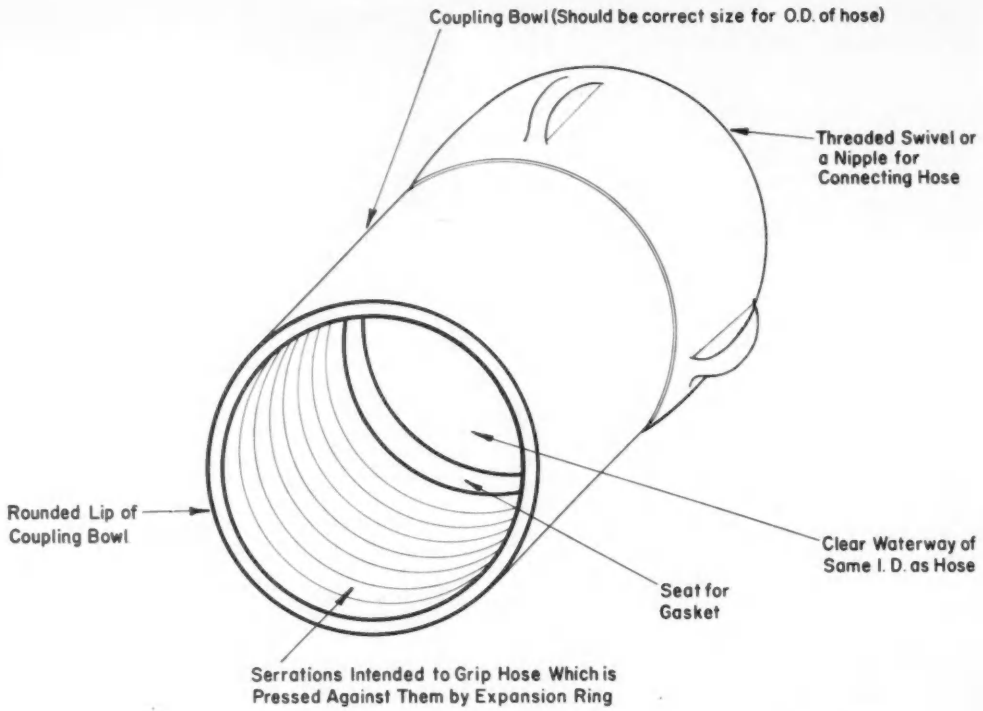
From *Hastings*, Chief R. J. Van Fleet reports that his department is attempting to develop pictures, charts and maps for opaque projection instruction of fire fighters and civic groups. The chief says, "We are using NFPA and NBFU Standards, actual fire pictures from NFPA publications, bulletins of UL and FM Laboratories and any other material which pertains to the work of firemen, fire protection and prevention."

A new rescue unit is scheduled for delivery to the fire department in *Fremont*, reports Chief J. H. Mordhorst. Specifications have been drawn and bids will be up in the near future. Chief Mordhorst's department gives a great deal of attention to rescue and first aid and was highly impressed with the Red Cross film "That They May Live." Members have shown the film 67 times in the past six months to the P.T.A., Scout troops, Extension clubs, and other civic organizations. The Chief cites an experience of a Telephone Company employee who had seen the film and the following day used mouth-to-mouth respiration to resuscitate a TV repairman who had been knocked out by a 13,800 volt charge. Fremont's fire department members have examined 63 Boy Scouts for merit badges in First Aid, Pathfinding, Firemanship and other subjects.

In *Norfolk*, the Elkhorn Valley Historical Society is collecting a number of pieces of old-time fire apparatus and equipment. These items are loaned by various fire departments such as Milford, Carleton, Duncan and Schuyler to build up a fire equipment museum. The fire departments may claim their property at any time.

An eight-month-long Junior Fire Patrol Program, designed to teach fire safety, is being conducted by the Nebraska Fire Chiefs and sponsored by the State Fire Marshal's Office. The program begins with the start of the school term, reports State Fire Marshal Joseph F. Divis, and at the end of the training period the student who finds and eliminates the most fire hazards becomes Chief of the Patrol. A one-day program for these children will be set up at the State Fire School grounds in Grand Island at the end of the school term of 1962.

The Fire Marshal's Office is also in the process of modifying the State's school regulations and revising regulations pertaining to old age homes, child care institutions and child day-care centers.


Coupling Bowl (Should be correct size for O.D. of hose)
Threaded Swivel or a Nipple for Connecting Hose
Rounded Lip of Coupling Bowl
Clear Waterway of Same I. D. as Hose
Seat for Gasket
Serrations Intended to Grip Hose Which is Pressed Against Them by Expansion Ring

ATTACHMENT OF COUPLINGS

MANY fire departments have experienced difficulty with couplings coming off the hose. This can be quite dangerous during a fire because of the loss of water and the danger that a line under pressure may get away and injure someone.

Trouble with loose couplings seems to be much more common since the introduction of fire hose jackets made of synthetic fibres. These appear to be harder and smoother than the all-cotton jackets and the smooth surface of the expansion ring does not hold them as securely into the coupling bowl. The synthetic fibre jackets tend to be somewhat thinner in wall thickness, which may account somewhat for the difficulty of securing the coupling to the hose.

Every time hose is changed or tested the couplings should be carefully inspected and any tendency for the coupling to creep off should be noted and corrected.

Most hose authorities recommend that unless a fire department has special equipment and men well trained in the art of coupling hose, the hose should be coupled at the factory or hose supply house where experienced men are available. When attempting to attach couplings with an expander, too little pressure will result in a coupling that is not firmly attached and too much pressure may damage the hose bowl which can be overexpanded or cracked, resulting in future failure.

Fire departments which purchase hose bearing the label of Underwriters' Laboratories, Inc. may believe that the label covers the inspection of the couplings as well as the hose. As a general practice this is not so. The label covers the test and inspection of the hose. If a report is requested on each length of fire hose, this report will indicate whether the hose was tested with the couplings which are to be delivered to the purchaser of the hose or with factory test couplings. It will not indicate whether the hose is safely or properly coupled. Underwriters' Laboratories, Inc. has a specification for UL listed fire hose couplings but these are not necessarily used in connection with purchase of UL listed fire hose because hose specifications may not require listed couplings. Apparently UL does not test or list couplings furnished with hose other than those made to the UL specification. Therefore, labeled hose does not necessarily mean labeled or securely attached couplings.

When any new fire hose is received, whether labeled or not, the purchaser should inspect each length to see that the coupling is properly attached, that no coupling bowls are broken, that the coupling swivels work properly, that no expansion rings are broken, and that the hose is not cut or pinched where it enters the coupling. In some cases the hose has been badly pinched and seriously obstructs the waterway. If hose is not properly attached to the coupling, the water under pressure may get behind the expansion ring and gradually force the hose off or cause it to deteriorate.

Quite frequently the question is asked, "How many times can couplings be re-used?"

Actually, some of the most serviceable expansion ring type couplings are one-use type couplings. When they have been attached once, they have had it. Other

fire departments have made a practice of re-using couplings as long as they will hold together. When the bowl into which the hose is inserted is expanded so that a standard size expansion ring will no longer hold the hose securely, these departments buy larger size rings and continue to force out the coupling bowl although most of the life and holding power has long gone from the metal. This is not as economical as it might seem because the over-sized rings cost much more than standard expansion rings and there is still not reasonable assurance that the couplings will hold.

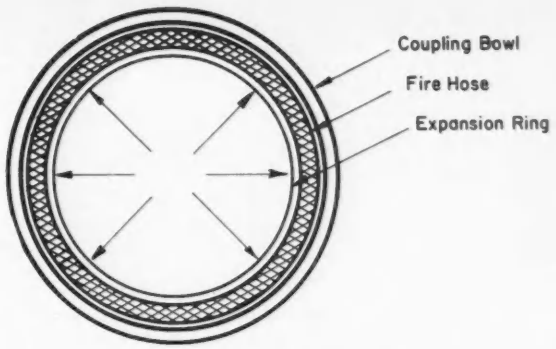
Each time pressure is applied by the "expander" to secure the hose into the coupling bowl by means of an expansion ring, the bowl is stretched outward slightly and metal fatigue is increased.

Certainly, a coupling should not be re-expanded more than once or twice. However, the recommendations of the NFPA Committee on Fire Hose as set forth in Standard 198, "Care of Fire Hose," are that new couplings be provided for new hose or when the hose is recoupled. A coupling for fire hose takes a lot of hard wear and necessary abuse. When hose is laid out from a fire truck the couplings strike the ground with considerable force and they also take a lot of hard use during fire fighting. Considering the importance of a reliable line of hose it is not extravagant to require a new coupling when hose must be recoupled.

One reason for increase in trouble with coupling attachment and for the recommendation that hose be factory coupled is that in recent years, due to the difference in fibres used for hose jackets, hose has been manufactured with different wall thicknesses and different outside diameters even though nominally of the same size. NFPA Standard 196, "Fire Hose," has attempted to meet this problem, at least in part, by specifying the dimensions of coupling bowls that should be provided with the hose of different types: i.e., single or double-jacketed. However, if a fire department has a number of couplings designed for use with heavy all-cotton-jacketed hose and attempts to re-use these couplings on lightweight, thin-walled synthetic fibre hose, they are asking for trouble. Unless the new lightweight hose was specifically manufactured to fit the old coupling bowls, it will not fit properly and it will be very difficult to obtain a secure attachment. However, if the new hose is factory coupled with new couplings designed for the purpose and put on by skilled workmen it should remain securely attached. Even so, every coupling should be carefully inspected as outlined above when the hose is delivered, regardless of whether it is labeled or not.

The present design of American expansion-ring type fire hose couplings has a long history. They were designed to provide a substantially unobstructed waterway and most certainly are an improvement over the European couplings which frequently are attached by external wires or clamps which are obstructions on the external surface of the coupling as well as interfering with the waterway.

However, the smooth expansion ring as a device to hold smooth hose into a coupling bowl against considerable stresses and strains and against very appreciable pressures may leave something to be desired, particularly if the coupling is attached by amateurs. Accordingly, there has been interest in couplings of a somewhat different design which eliminate the smooth expansion ring. These couplings also provide an unobstructed waterway but instead of using an expander machine to force a metal ring against the hose and against the inside of the coupling bowl, these newer couplings use a threaded internal attachment which is easily screwed in by hand with a key, locking the hose into the coupling. This design is commonly used where working pressures up to 800 psi or more are required and in tests the hose itself has invariably failed without loosening the hose from the coupling. Another feature is that these couplings are readily removed and are reusable because they have not been fatigued or damaged by expansion. It is possible that within a relatively few years the old smooth expansion ring type of coupling will give way to various improved designs. In the meantime, couplings are a real problem to every fire department using fire hose and deserve much more attention than they have been receiving.



Expander Pushes Ring Outward Securing Hose Against Serrations on Inside of Coupling Bowl

The Woman's Approach

BY NOW the fire service is well acquainted with methods of marking dwellings where invalids or other incapacitated persons reside. There is always the problem, though, of getting public attention and cooperation for the invalid marking program.

A novel approach to this was followed by the Women's Committee of the Morris County, New Jersey, Safety Council. Members of this group developed a card, as shown below, which was given to invalids and handicapped persons when they left hospitals in the area. The card measured 4- x 6-inches and contained the following text:

(Leave card at hospital or local fire station)

I understand that my local fire department will place a red and black emblem on any home containing an invalided or seriously handicapped person who should have special directed rescue or assistance in a fire or other emergency. This helps them spot and locate such persons who cannot effect their own escape. There is a person of this kind in my home and I should like it so identified for this important life-saving service.

Name.....

Address.....

..... Date.....

Apt., floor, phone.....

(Women's Committee, Morris County Safety Council)

(*Wide World photo*)

SWIMMING POOL FIRES

by Chester I. Babcock, NFPA Assistant Technical Secretary

THE increasing number of residential swimming pools has raised a new problem for fire departments. This is obvious from reports coming to the NFPA Fire Record Department. The problem is introduced by the chemicals used to disinfect these pools. Calcium hypochlorite (a dry powdered material) and chlorine gas are most commonly used for this purpose.

Typical Fire Experience

An 11-year-old boy in Fairview Park, Ohio, scooped powdered disinfectant from a drum, took a few steps toward the pool nearby, just when an explosion occurred in the drum. Most of the powder was blown out of the drum and fire started in the drum. The fire had gone out by the time the fire department arrived.

Another incident, also involving calcium hypochlorite, was reported by Tulsa, Oklahoma, Fire Chief G. L. Sartain. In this instance, water from a sewer backed up into the basement of a dwelling where a drum of the disinfectant was stored. When the drum tipped over, water got inside around the loosely fitted lid. Reaction of the disinfectant and water generated chlorine gas which blew off the lid and filled the house with chlorine.

In Westwood, N. J., a home owner was transferring calcium hypochlorite type disinfectant from a 100-pound drum to a 5-pound metal container in his garage. The small container supposedly was clean and dry, but in any case it burst into flames in his hands, causing him to drop it. Combustible materials in the garage ignited including material stored on the rafters overhead. Prompt arrival of the fire department kept the loss to $1,300.

The Redington Beach, Florida, Fire Department recently reported an experience that illustrates the type of problem fire departments may encounter if the swimming pool disinfectant is chlorine. Responding to an alarm for fire in a beach club, Redington Beach's men found fire in a small room in which furniture, beach chairs and cylinders of chlorine were stored. Apparently the heat of the fire had caused a fusible metal plug in a chlorine cylinder to melt.

The only breathing apparatus carried by the department were all-purpose canister type masks, devices which do not provide suitable protection against high concentrations of chlorine. Three fire fighters were treated for chlorine poisoning at the scene and four were hospitalized. The fire was controlled after the Madeira Beach Fire Department, which had self-contained respiratory equipment, responded to a request for help.

Properties of Calcium Hypochlorite

Calcium hypochlorite is commonly referred to as bleaching powder. It liberates free chlorine when added to water. As a disinfectant it is the active ingredient in various trade-name products recommended for swimming pool use. As such, it is very effective as a germicide, but those who use it should be fully aware of its hazardous properties.

Calcium hypochlorite is a strong oxidizing agent. It is not combustible, but when mixed with combustible material, the resulting mixture may be easily ignited by low energy ignition sources such as friction sparks. The Fairview Park fire probably resulted from the introduction of combustible material to the drum by a dirty scoop or otherwise. The source of ignition is not known.

The property of calcium hypochlorite responsible for the Tulsa incident is its reaction with water to release copious amounts of chlorine. It is not clear whether moisture or combustible foreign material caused the Westwood, N. J., fire.

Hazardous Chemicals Data (NFPA Pamphlet No. 49M) has this to say about calcium hypochlorite:

DESCRIPTION: White powder with strong chlorine odor.

USUAL SHIPPING CONTAINERS: Airtight cans, wooden barrels, steel drums.

FIRE AND EXPLOSION HAZARDS: Not combustible but evolves chlorine and at higher temperatures, oxygen. With acids or moisture, evolves chlorine freely at ordinary temperatures. See CHLORINE. Hazardous in contact with combustible, organic or other easily oxidizable materials.

LIFE HAZARD: Irritating to skin, eyes and respiratory tract. Wear protective clothing, goggles and suitable respiratory protection against dust.

STORAGE: Protect against physical damage. Store in cool, dry, well-ventilated place away from combustible materials. Drums may rupture from exposure to heat, particularly if chlorine content is high.

FIRE FIGHTING PHASES: Use water, preferably in form of spray. Wear protective clothing and self-contained breathing apparatus.

Additional instructions that should be passed along to swimming pool owners include: (*a*) Store these swimming pool chemicals out of reach of children, (*b*) Dispose of spilled material immediately by flushing with large quantities of water, and (*c*) Use clean, dry and noncombustible scoops when transferring the disinfectant from the drum to the pool.

Properties of Chlorine

Chlorine is a nonflammable gas, but, like oxygen, is capable of supporting the combustion of certain sub-

(*Continued on page 20*)

Fire Marshals Association of North America

Fire Marshal Raymond M. Hill, Los Angeles, retiring president of the Fire Marshals Association, receives a plaque from William L. Heaton of Austin, Texas, first vice president of the Fire Marshals Association.

Portion of the crowd which attended the meeting of the Fire Marshals held all day on Monday. Altogether, the Annual Meeting registration approached 1,400 NFPA members and guests.

Annual Meeting at DETROIT *in Pictures*

May 15-19, 1961

Hon. John M. Wise, Michigan Circuit Court judge, discussed retroactive law enforcement.

Michigan Fire Marshal Glenroy M. Walker welcomed the visiting fire marshals.

Detroit Fire Marshal Glenn E. Thom discussed fire safety in homes for the aged.

Fire Marshal Willis H. Burton, Jr., of Fairfax County, Virginia, covered county fire prevention administration.

Church fire prevention was covered by Lieutenant William C. Seitz, Bureau of Fire Prevention, Columbus, Ohio.

Detective Inspector Glenn D. Bennett, of Detroit Arson Bureau, gave an interesting report on trends in arson.

Get-Together Party

For a number of years, the first evening of each Annual Meeting has featured the Get-Together Party as a means of bringing together old and new friends. Here is a portion of the crowd that filled the Grand Ballroom of the Statler Hilton Hotel on Monday evening.

Aviation Seminar

An illustrated talk on the LaGuardia "Electra" crash was given by M. Gould Beard, Assistant Vice President, Equipment Research, American Airlines.

Melvin Gough, Director, Bureau of Safety, Civil Aeronautics Board, discussed CAB's views on aircraft crash fires.

First General Session

The First General Session featured reports of NFPA officers. Left to right, above, are T. Seddon Duke, Chairman of the Board of Directors; General Manager Percy Bugbee; and President Loren S. Bush. Standing, John J. Ahern, chairman of the local annual meeting committee, extends greetings.

Grand Award of NFPA Fire Prevention Contest was presented to Guide Lamp Division of General Motors Corp., Anderson, Ind. Left to right, above, are Percy Bugbee and General Manager Byron Stewart and Fire Chief John Brown, both of Guide Lamp Division.

(Right) Mayor Louis C. Meriani, of Detroit, extended greetings during the opening session.

Portion of the crowd which attended the First General Session. Almost every session had a "full house" and featured lively discussion and participation from the floor.

Honorary Life Memberships

(Right) Robert S. Moulton, who recently retired as Technical Secretary of the Association, receives certificate of Honorary Life Membership from President Bush. Mr. Moulton will continue as Secretary of the Committee on Safety to Life and will handle numerous other committee functions.

(Left) Another recipient of Honorary Life Membership was T. Seddon Duke, Chairman, NFPA Board of Directors and President, Star Sprinkler Corporation, Philadelphia, Pennsylvania.

George F. Wahl, General Manager, Factory Mutual Engineering Division, discussed human motivation for fire prevention.

Clyde W. Truxell, Jr., of General Motors Corporation, told how advances had been made in industrial fire protection since the memorable fire at Livonia, Michigan.

Fifty-Year Member Awards

T. Seddon Duke, Chairman, NFPA Board of Directors, presented awards to 9 persons or companies which have held membership in the Association for fifty years. At right, George Laiming accepts the award for Charles Niedner's Sons Company, Malden, Massachusetts; below, Herbert Hoyle accepts the award for Mather & Platt, Ltd., Manchester, England; and at lower right, George L. Schaefer accepts the award for the New York Public Library, of which he is Business Manager.

Electrical Section

The National Electrical Code and other topics were covered in the Electrical Section on Tuesday. At left is some of the crowd which attended the all-day meeting.

(Right) Presiding officer and Chairman of the NFPA National Electrical Code Committee is Baron Whitaker, Vice President, Underwriters' Laboratories, Inc.

Fire Prevention Education

Dwelling inspections by volunteer fire departments were discussed by Chief David B. Gratz of Silver Spring, Maryland.

"Big city" inspections were described by Chief Edward B. McCabe, who commands the Milwaukee, Wisconsin, Fire Department.

"Sparky" Painting

(Right) The original painting of the official "Sparky" calendar for 1962 was presented to General Manager Percy Bugbee by representatives of Osborne-Kemper-Thomas, Inc., Cincinnati, Ohio.

Chief Clay A. Easterly, of Martinsville, Virginia, gave "step-by-step" recommendations for home inspections by fire departments.

"Getting Fire Safety to the Homeowner" was the subject of a talk by J. R. DeHaven, Chairman, NFPA Committee on Public Relations.

Hamilton Lewis, of E. I. du Pont de Nemours & Co. (Inc.), discussed explosion hazards.

A. F. Dyer, of Phillips Petroleum Company, talked about underground mine storage of gases.

General Session

Portion of the crowd which filled the Bagley Room for the session on Fire Prevention Education. This year, dwelling inspections by fire departments was the main topic, and following the talks by featured speakers, many took part in a lively question and answer period.

Another view of a crowded meeting room. This is part of the group which attended the General Session on Wednesday morning to vote on technical standards pertaining to flammable liquids and gases and to hear speakers who covered related topics.

Society of Fire Protection Engineers

Wednesday afternoon included a meeting of the Society of Fire Protection Engineers. Here, the audience listens to an address by SFPE President James J. Duggan.

(Above) Dr. Ing. Gert Magnus, Chief Engineer of the Mannheim, Germany, Fire Department, addressed the Society in the afternoon session.

(Top right) James J. Duggan, President of the Society of Fire Protection Engineers.

(Right) At the Wednesday luncheon of the Society, a talk on nuclear power was given by Edward M. Spencer, Treasurer, Detroit Edison Company.

Forum Session

Chief William Taylor, Burbank, California, President of the IAFC, discussed current problems of the fire service.

Architect William Halsey, of Bastille Halsey Associates, gave a provocative talk on architecture and fire protection.

John W. Cramer, Vice President, American Water Works Association, discussed the currently serious problems of municipal water supply.

Final General Session

Herbert Hoyle, chief technical officer of Mather & Platt, Ltd., Manchester, England, presented an outstanding paper on pressure tank sprinkler systems.

The many problems of institutional fire protection were summarized by Rexford Wilson, NFPA Fire Record Editor in the Friday morning session.

Each day of the Annual Meeting featured at least one social gathering of the wives of NFPA members and guests. The group above are some of more than one hundred who attended a hat style show and tea party at J. L. Hudson Company on Tuesday.

Technical standards on sprinkler systems, new information on fire detection in schools and homes, the Building Exits Code and flameproofing of Christmas trees brought the final session of the Annual Meeting to a close. This crowd stayed until adjournment at noontime Friday.

MANUAL FOR VOLUNTEERS

Glen Echo Volunteer Fire Department "spells out" requirements and privileges of its members. Many other volunteer fire departments will find these regulations interesting and may want to establish similar procedures to fit their own organization and administration.

Part I of two parts

THE Glen Echo, Maryland, Volunteer Fire Department headed by Chief Joseph A. Giammatteo, issues to each member a detailed *Fireman's Manual* containing information which members should have regarding organization, procedures and practices, operations, and general rules of the department. At the semi-annual departmental inspection the manuals are presented so that new pages may be added, obsolete material removed and corrections made.

While the details of operation will vary from one department to another, the following condensation of the material covered in the Glen Echo Fire Department manual may help other departments which might desire to prepare a similar text. The manual is multigraphed on 8½- x 11-inch pages and embraces 22 pages of text plus table of contents and introduction.

While the Glen Echo Fire Department is an organization of unpaid volunteers, a company of paid fire fighters is employed to provide initial response to daytime calls and a paid desk man is on duty at all times. Each night a company of volunteer firemen is assigned to duty at the station to man the first piece of apparatus. Other members are expected to respond as quickly as possible when the siren sounds, both day and night.

I. ADMINISTRATIVE

A. Organization

1. The Fire Board

The Conduit Road Fire Board, Incorporated is the corporate entity with responsibility for administering fire tax receipts in the area bounded by the District of Columbia, the Potomac River, Wilson Lane, and River Road.

Members of the board are elected each four years, one member coming from the area of each duly constituted Citizens' Association in the area, two members at large, and the Chief of the fire department. The Fire Board holds title to the station house and the fire and rescue equipment. They disburse fire tax receipts and handle the administrative and financial matters of the department. The Board also approves the department's budget and fixes the fire tax rate, both subject to review by the County Council. In general, they do all administrative work or authorize it where public funds are concerned, subject to recommendations of the fire department.

2. The Fire Department

The Glen Echo Fire Department is headed by an elected chief in charge of administrative and operational functions. The chief appoints a deputy chief, three fire captains and a rescue squad captain, three fire lieutenants and a rescue squad lieutenant, and three sergeants to assist in operative functions of the department.

A secretary and a treasurer are elected to assist with administrative functions. An Executive Committee composed of the secretary and four elected members (officers are not eligible) determines eligibility of applicants for membership, acts as a board of appeals, and performs other functions as set forth in the Bylaws.

B. Procedures and Practices

1. Dates of Meetings

Regular monthly meetings of the membership are held the last Monday of every month at 8 P.M. The December meeting, known as the Annual Meeting, is the one exception, being held the second Monday of December. The quarterly March, June, September and December meetings are the only meetings at which probationary members can be voted into the department provided they have served a probationary period of at least 90 days.

It has been traditional that Tuesday night be reserved for schools and drills. As participation in instruction courses is compulsory, members should avoid any long-term commitments for Tuesday nights.

Officers' meetings are held the first Monday of every month. The Executive Committee meets once a month, or as necessary. Members having to appear before the Executive Committee should contact the secretary for dates of the meeting.

2. Privileges of Members

Membership in the department entitles a member to all facilities of the station house subject to the established rules. The department also has arrangements to buy wholesale with many firms in town and members may share this arrangement. Certain tools and equipment may also be used by members. It goes without saying that privileges which are abused will be withdrawn, and any offending party will be properly punished.

3. Duties of Members

The Bylaws state that "It shall be the duty of a member to respond to emergency calls, attend drills, regular meetings and attend courses in fire training." To stay in the department, you must attend at least three regular meetings and 25 percent of the scheduled drills. To be eligible to vote at the annual meeting, you must attend six meetings and 50 percent of the regular drills.

In addition, new members must complete the Maryland University Fire Extension Service Basic Course at the first opportunity and the Advanced Course within three years thereafter. After this, a member must complete such courses as the Executive Committee may determine — which means generally that you must take some course at least every three years.

While the Bylaws impose the above duties to ensure a smooth-running, efficient and harmonious organization, it is necessary to assume other duties. These include participation in special assignments, fund raising, committee work, cooperation in night duty assignments, and, in general, giving a hand cheerfully whenever needed. A volunteer fire department can only operate effectively and efficiently with the cooperation of all members.

4. Duties of Sponsors of New Members

It is the sponsor's duty to make certain prospective members are present at the meeting at which their application is presented to the department and at the quarterly meeting at which the application is voted on. He must also instruct them sufficiently in the department's operation

and equipment so that they can pass the entrance examination. He must be sure the applicant takes the test.

In addition, the sponsor should help the applicant to meet the other members, acquaint him with the policies and procedures of the department, and impress him with his responsibilities as a member of the department.

5. Rules for Junior Members (also see Order of Precedence When Juniors Respond)

Junior members enjoy all privileges and responsibilities which are afforded regular members with certain minor exceptions imposed because of their youth.

It is a rule of the department that junior members shall be out of the fire house by 10 P.M. on school nights. If meetings or classes last after 10 P.M., juniors must leave as soon as they are over.

Junior members are permitted use of the pool table when it is not in use by regular members, or when invited to join in by regular members.

Junior members are *not* permitted to drive *any* apparatus at any time.

Junior members are required to maintain satisfactory grades in their schoolwork. In the event they fail to maintain grades, fire department's rights and privileges are withdrawn until the members have brought their schoolwork up to satisfactory.

Junior members must have permission from their parents to serve on night crews. Juniors will only be used on night crews when full crews of regular firemen are not available.

6. Reports — General

The department has developed a system of reports and records which, if properly used, enables us to operate in an efficient, businesslike manner. Our system has received nationwide attention and has been copied by many departments all over the country.

The CALL REPORT is the most important form which the majority of members will come in contact with. The man in charge of every call is responsible for completing this report at the end of each call. A call for which a report must be completed includes all fire, rescue, service calls or drills in which fire department equipment or vehicles are used except only when the Chief's car, Car 111, or the utility truck, Utility 11, are used on fire department business. When these two vehicles are used for fire department business, the mileage and purpose are noted on a form carried in the glove compartment.

There are times when an officer is not present to prepare a Call Report. Therefore, each man should be familiar with that report and its uses. It is important that the report always be properly and completely filled out as it is used to make regular reports to the County and the State. The reports are subject to review by the Maryland Fire Rating Bureau, and they are occasionally used in court cases.

It is the responsibility of each man who is on a call to see that his name is listed on the Call Report, by "pegging up" on the attendance board. If for any reason your name is omitted from the Call Report, bring the matter to the attention of the officer who prepared the report or another officer who will see that your name is added with his initials. Do not under any circumstances alter the Call Report yourself. No changes are to be made in these reports other than by the officer writing the report, the chief, or the officer responsible for the report or by their authority.

The DRIVER'S CHECK LIST must be filled out by the driver of each piece of equipment after each call for which a call report is completed. If any equipment is missing or not functioning properly, or if the vehicle was not operating properly, it is the driver's duty to note this on the reverse side of the form.

There is a GAS AND OIL REPORT. Whenever gas or oil is put in the vehicle it must be noted on this form.

7. Insurance Coverage

Insurance protection is provided without expense to members in good standing, including paid employees of the department. The following is a general description of the coverage and benefits. For exact information, consult the group policy under which these benefits are provided.

The coverage is effective in case of accidental death or injury while at fires, going to or returning from fires, while engaged in drills or parades or while testing apparatus. (*The amounts of coverage are stated — Ed.*)

Under the terms of the group policy, volunteer members are covered while on a rescue or service call or while responding to or returning from such a call.

A separate insurance program is in effect for paid men. While there is some necessary hazard connected with fire department operations, with training and good judgment the risk can be kept at a minimum. The insurance coverage provided the members by the Fire Board is to cover this additional hazard to which members may be subject. This coverage cannot be considered as substituting for an equal amount of regular life insurance which a member may need for the protection of his family or dependents.

8. Reporting Procedure on Injuries

This is important. Should you be injured in any way while engaged in fire department activities, report the injury to the officer in charge who is responsible to see that a statement of the facts is entered on the report of the call and recorded in the minutes of the next regular monthly meeting of the department. This statement on the original Call Report may be important to you should it develop that you have a legitimate insurance claim.

Claim forms may be obtained from the paid fireman on duty and should be filed within three days after the accident. However, if you fail to file within this limit and the injury was properly noted on the Call Report, the insurance company may allow the claim.

9. Reporting Accidents Involving Vehicles

Any accidents involving vehicles of the department must be reported immediately to the police in the same manner that any automobile accident is reported. They should also be noted on the Call Report and Driver Check List.

Any driver involved in an accident *will immediately be suspended* by the officer in charge from driving any equipment until the Chief or the Executive Committee makes a determination in the case.

10. Explanation of the Merit System

Members are rated each year under a merit point system. Points are earned for attendance at fires, rescue calls, drills, service calls and training classes. Points are also earned for special assignments or night duty. At the end of each year, the points earned by each member are totaled and a list posted. This gives a good indication of participation in fire department activity.

The members, excluding officers, having the highest number of points each year are usually recognized by being given a suitable award by the Fire Board at the annual banquet. In addition, alternate delegates to the State Firemen's Association meeting are usually selected according to merit rating by the Executive Committee.

11. Attendance at Conventions and Parades

The Montgomery County Association of Volunteer Firemen Annual Meeting is attended by the regular delegates and any other members who choose to go. The annual convention of the Maryland State Firemen's Association is attended by five delegates, the secretary, the treasurer, and five alternates designated by the Executive Committee. The Fire Board and fire department jointly supply funds to help defray costs of men attending this convention.

The question of attendance at any parade is determined at the monthly meetings by the members. It is customary to accept parade invitations in Montgomery County only to the extent that equipment can maintain radio contact and not be too far from home. The Chief designates how many pieces shall go.

12. Loaning of Equipment

It has always been the department's policy to loan small equipment, such as tools not used for fire fighting, to the members. Any equipment loaned should be signed out by the houseman on duty, and signed in on return. No equipment is loaned to non-members unless authorized by the Chief, except that we have loaned folding chairs and tables to certain organizations upon proper request.

The continuation of loan privileges to members depends on their cooperation in maintaining borrowed equipment properly and returning it promptly.

13. Buying Through the Fire Department

The department is glad to extend discount purchasing privileges which it enjoys to the members. All transactions are made on a cash-in-advance basis.

14. Fire Department Emblems and Automobile Tags

Most members desire to designate by some emblem that they are members of the fire department. Such emblems are an assistance in driving through police lines to reach fires and gain some recognition from other drivers on the

road when responding to calls. Members of this department are using either printed signs or a white Maltese Cross attached to license tags.

The State also issues a series of automobile tags with the letters "FD" for firemen. To obtain these tags you must turn your license applications and fee into the fire department treasurer.

Some members also use blue lights on their cars. Montgomery County permits the use of these lights so long as they are not flashing. The blue light does *not* give you any right of way over any other traffic on the road, but other drivers who see the lights may yield to you out of courtesy.

II. OPERATIONS

A. The Chain of Command

No organization can operate properly without established channels of authority. In an organization like a fire department which must be constantly on the alert, and which must move out rapidly and act swiftly on the scene to minimize destruction, any lack of proper direction can mean chaos and possibly even death.

The established chain of command in the department is from the Chief through the Deputy Chief; Captains Nos. 1, 2, 3; Lieutenants Nos. 1, 2, 3, and 4; the Sergeants; the Captain and Lieutenant of the Rescue Squad. In the absence of all officers on a call, the man seated next to the driver on the first piece responding is in command.

Every man in the Glen Echo Fire Department receives thorough training and should feel capable of taking command at least of minor calls. However, it is the responsibility of the senior officer present to exercise command and it is as important for him to do this as for the rest of us to follow his orders. In a volunteer department we all recognize though that some of our members are extremely capable in certain fields because of past experience or their regular occupations. When such a man is on the fire scene, he should offer advice through the officer in command, but should never countermand or alter orders.

B. Officer Responsible on the Fire Ground

In our area (*fire tax district*) the senior officer by rank on the scene will be in command. This will generally mean the officer in command of the first piece responding. In certain cases, however, a senior officer may have responded directly to the scene and arrive before the apparatus. In this case, he will immediately assume command. In the event a senior officer arrives after the apparatus, he will assume command after making his presence known to the officer then in command.

In areas outside of our area, the officer in charge of Glen Echo will take orders from the senior officer of the department in whose area the fire is located. Glen Echo firemen will continue to take orders from their own officers unless assigned to specific duties under the command of an officer from another company.

C. Running Plans

(*Normal running assignments for response of two pumpers and other equipment are spelled out. Riding positions on the apparatus are numbered and duties are specified for each position. Duties of drivers and officers of each piece are covered in detail — Ed.*)

General Rules for Other Men Responding

(a) Upon arrival on scene contact officer-in-charge for instructions.

(b) Assist in performing the necessary duties on fire ground; such as, extending and straightening lines; raising ladders; ventilating when directed; spreading salvage covers; setting portable lights; operate portable radio for officer-in-charge, etc.

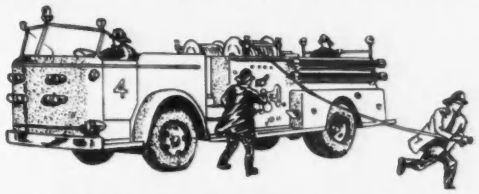
D. Special Assignments

At the request of Cabin John Fire Department, the following procedures will be followed in their area. When fire is located beyond the last hydrant but close enough that a layout is possible, Glen Echo equipment will hold up at the last hydrant and request radio instructions before proceeding to fire.

(*A list of hydrant assignments for target hazards follows — Ed.*)

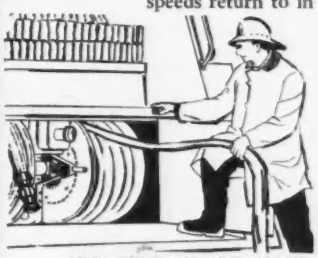
(*To be continued*)

Did You Know?



BOOSTER HOSE IS USED ON UP TO 85% OF ALL SUBURBAN AND RURAL FIRES AND OVER 50% OF ALL OTHER FIRES

These statistics emphasize the need for the faster, more efficient handling and maintenance of booster hose provided by the modern hose reel. The reel permits instant action with liquid always ready at the nozzle. Rewinding by hand or with electric motors provides neat, compact storage and speeds return to in service status.



200 FEET OF CRL HOSE CAN BE HANDLED EFFICIENTLY ON ELECTRIC REWIND REELS

One man can pay out and rewind CRL hose in less time than is normally required by three or more men when reels are used instead of coiling the hose in the truck bed. Powerful, electric rewind motors with remote switch makes pre-connected collapsible hose handling as simple as handling booster hose. Reels are designed with a capacity up to 200 feet of 1½ inch hose. In addition to faster handling, reels reduce wear and maintenance.

REWIND MOTORS CAN BE MOUNTED IN SIX DIFFERENT POSITIONS ON HANNAY REELS OR MOUNTED SEPARATELY IN THE CABINET

Hannay chain drive reel design lets you put the rewind power where *you* want it for most efficient arrangement of equipment on the truck. Positive chain drive is always perfectly aligned, whether drive motor is mounted on the frame or in any remote position on the circumference of the reel.

For complete information on fire hose reels, send for the pocket-size guide to "Efficient Hose Handling for Fire Fighting Equipment." Read about the features that make Hannay reels the first choice of fire fighters everywhere.

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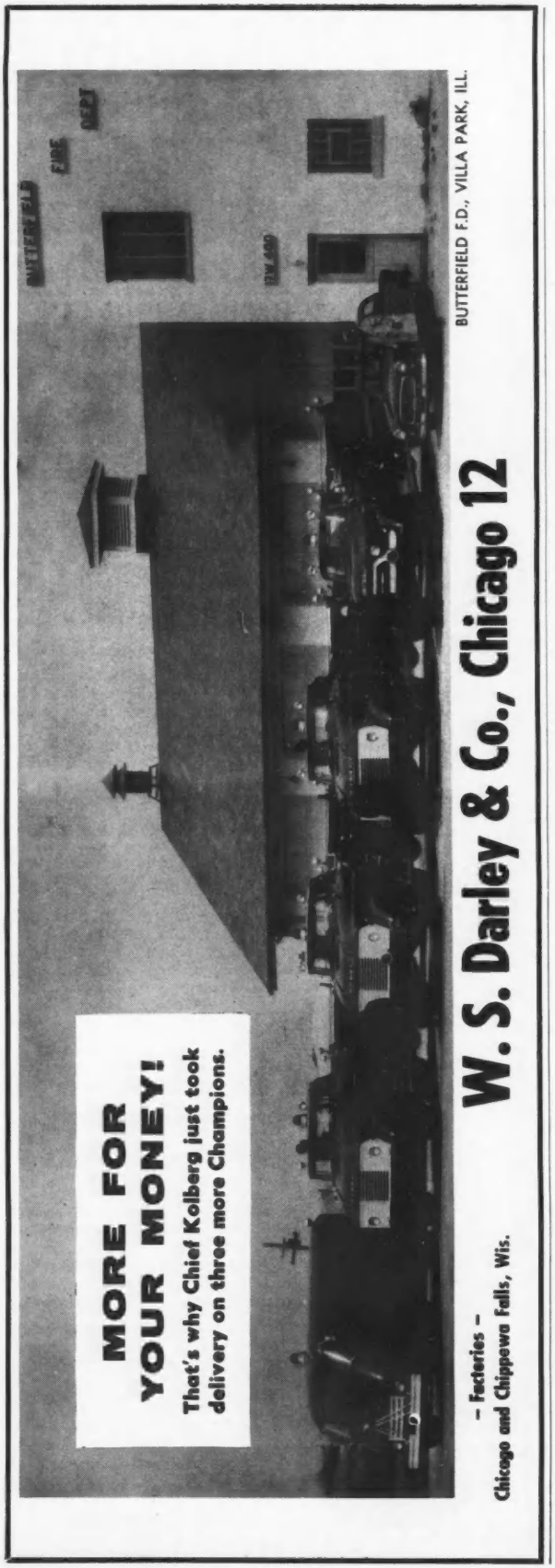
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That's why Chief Kolberg just took delivery on three more Champions.
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Swimming Pool Fires

(*Continued from page 16*)

stances. Chlorine is toxic and this property is of primary concern to fire fighters. In his book *Fire Protection for Chemicals*, Charles W. Bahme, Deputy Chief of the Los Angeles, California, Fire Department, states that a few deep breaths of chlorine at concentrations of 1,000 parts per million are likely to be fatal and that concentrations of from 40 to 60 parts per million are dangerous for even a short exposure.

Fortunately, chlorine is intensely irritating to the respiratory system and concentrations of 3 to 5 parts per million in air are usually readily detectable. A person would not willingly remain in atmospheres containing higher concentrations.

Air-purifying respirators, such as the canister masks worn by the Redington Beach Fire Department, should not be used in atmospheres having concentrations in excess of 20,000 parts per million (2 per cent by volume in air) of chlorine. In emergency situations, when chlorine concentrations may greatly exceed 20,000 ppm, fire fighters should wear self-contained breathing apparatus which provide the wearer with a source of air or oxygen independent of the contaminated atmosphere. (*The NFPA recommends that fire departments use breathing apparatus which has been approved by the U.S. Bureau of Mines. Masks must also meet requirements of state law where applicable — Ed.*) It is reasonable to conclude that the chlorine poisoning suffered by members of the Redington Beach Fire Department would not have occurred had they been wearing this self-contained equipment. Following this beach club fire experience, the Redington Beach Fire Department purchased two of these.

The NFPA Committee on Chemicals and Explosives includes the following statements on chlorine in *Hazardous Chemicals Data* (NFPA No. 49M):

DESCRIPTION: Pungent, irritating greenish-yellow gas.

USUAL SHIPPING CONTAINERS: Steel pressure cylinders and tank cars.

FIRE AND EXPLOSION HAZARDS: Noncombustible in air, but most combustible materials will burn in chlorine as they do in oxygen; flammable gases and vapors will form explosive mixtures with chlorine. Reacts explosively, or forms explosive compounds, with many common chemicals, especially acetylene, turpentine, ether, ammonia gas, fuel gas, hydrocarbons, hydrogen and finely divided metals.

LIFE HAZARD: Poison gas. Used as such in World War I. Maximum acceptable concentration, 1 part per million. Liquid chlorine will cause serious skin burns.

STORAGE: Protect against physical damage. Separate from combustible, organic or easily oxidizable materials and especially isolate from acetylene, ammonia, hydrogen, hydrocarbons, ether, turpentine and finely divided metals. Store outdoors or in well-ventilated, detached or segregated areas of noncombustible construction.

FIRE FIGHTING PHASES: Wear self-contained full face mask breathing apparatus and full protective clothing. Water may be used to keep surroundings or tanks cool but should not be applied directly to leaks from containers of liquid chlorine because it will increase the rate of vaporization.

The NFPA Fire Record Department would appreciate reports from other fire departments which encounter fire or explosion incidents in which swimming pool chemicals are a factor.

Inadequate Exitways

(*Continued from page 9*)

(5) Reappraisal and revision of fire prevention ordinances to include more stringent regulations on exitways and exitway features in supermarkets.

Unfortunately, many laws are enacted only following some calamity and usually they are hastily drawn. The Iroquois Theater disaster in Chicago in 1903, caused many cities to adopt suitable requirements for exitways in theaters and fire-resistive curtains and automatic sprinklers on stages. After the City of Salem, Massachusetts, in 1914, was devastated by a conflagration because of wood shingle roofs, hundreds of communities adopted ordinances prohibiting wood shingle roofs. The loss of 125 lives in the Cleveland Clinic fire in 1929 led many cities to adopt restrictions on the storage of nitrocellulose X-ray film. A night club fire in Boston in 1942, and hotel fires in Chicago and Atlanta in 1946, led to new regulations designed to prevent fires. A calamitous and unnecessary loss of life in "Our Lady of the Angels" school in Chicago in 1958, focused national attention on open and exposed stairways and the need for enclosing them.

Surely it is better to prevent an occurrence than to wait for it to happen and then to lament its dreadful consequences. The old saying "an ounce of prevention is worth a pound of cure" can have no more pertinent application than to the need for adequate exitways from supermarkets. If such facilities are provided before the necessity for their use arises, then it is reasonable to assume that the consequences for their omission may never be realized. And one thing is sure: this trend to inadequate exitways in supermarkets may be expected to continue until corrective steps are taken on a substantial scale.

It behooves the fire service, as the protectors of life and property, to take the lead in securing the adoption of these corrective steps.

Actual photo of fire exitway from utility area of supermarket, padlocked and obstructed by merchandise in such manner as to preclude its use in event of emergency.

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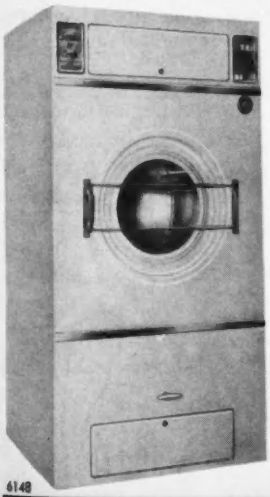

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Obviously, The Cornelius Company is in a better position than any other firm to sell you modified Cornelius equipment. We do not because we value your safety and good health above any sales we might achieve by selling "surplus" equipment that is PARTIALLY MODIFIED and does not incorporate all internal changes necessary to rebuild these units to provide safe, pure air.

When these "surplus" compressors were first available, The Cornelius Company investigated thoroughly in their research laboratory and engineering departments whether or not these units could be reworked as required to provide air of breathing quality. Even on a full production line basis, the cost of the complete modification to meet demands for consistently pure, clean, fresh air was found to be more than the cost of manufacturing new units of like capacity.

There are three good reasons why "surplus" compressors should not be used for breathing air.

(1) "Surplus" equipment was originally designed for use on aircraft without qualifications for providing air of breathing quality. There is always a danger they will produce compressed air which may be highly toxic and injurious.

(2) These "surplus" compressors are designed for 1500 psi operation. To properly fill your air cylinders, higher pressures are needed. Operating "surplus" compressors in excess of rated pressure may result in higher internal temperatures in the compressor. This could cause the formation of carbon monoxide. Another risk in running these units above original pressure specifications is the possibility of structural failure which would make the unit inoperable. Or, a resulting rupture could cause a severe injury to anyone near the equipment.

(3) Replacement parts for "surplus" compressors are not available. If "surplus" equipment should need repair you may forfeit your entire investment because of this fact.

Cornelius does make compressors specifically designed for safe, breathable air. These are recognized as the most efficient, dependable compressors made. They are the most widely used compressors for providing breathing air. Cornelius compressors are sold with an unconditional one-year guarantee against defects in materials or workmanship. Given normal, reasonable care, your Cornelius compressor should provide you with long, carefree service.

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BRANCHES IN PRINCIPAL CITIES

Bouquet

COMPLIMENTS are due to the Yakima, Washington, Fire Department; to Lyle L. Goodrich, Supervisor, Fire Training, State Board for Vocational Education; to Washington State fire training instructors, and to others who helped to present the recent Command School in Yakima as part of the state fire training program. This year's program had an exceptionally good variety of speakers and topics of particular interest to fire chiefs and other command officers.

Just after completion of the School the State Board for Vocational Education issued a 116-page, 8½- by 11-inch paper-bound volume containing the speeches and diagrams presented by the various featured speakers.

Others responsible for putting on the outstanding program included: Louis Bruno, State Superintendent of Public Instruction; Herman Miller, State Director, Vocational Education; Chief W. E. Brower, Everett Fire Department; and Assistant Chief William Kuehn of the Yakima Fire Department.

Preparation in Baltimore

BALTIMORE, Maryland, Fire Department, headed by Chief John J. Killen, recently had opportunity to apply some of its specialized training. On March 28, Lieutenant Raymond L. Witt, of the Fire Prevention Bureau, was making a routine inspection of pier facilities. He detected the odor of chlorine gas coming from the hold of a ship, the S.S. *Frances*, which contained 15 one-ton chlorine gas cylinders and general cargo. (The cylinders supposedly were empty.) Lieutenant Witt immediately warned the workmen of the deadly nature of the gas and notified the U.S. Coast Guard, who responded.

During the unloading processes, approximately 1½ hours later, a discharge valve on one of the cylinders ruptured, causing chlorine gas to fill the vessel. Lieutenant Witt took the initiative to have the vessel evacuated and called the fire department for assistance. Engine (Rescue Squad) Company No. 1, Engine Company No. 17 and Truck Company No. 19 responded. Mobile Hospital Unit and municipal ambulances were also dispatched to the pier, and the safety engineer of the Allied Chemical Corporation was also contacted and dispatched a trained crew with necessary equipment to cap the leak.

Subsequently, 47 persons were taken to hospitals by municipal ambulances and the master plan for handling disasters in Baltimore City was activated.

Chief Killen reports that just about a year ago 650 members of the Baltimore City Fire Department attended the Chlorine School conducted by the Solvay Process Division of the Allied Chemical Corporation. He says: "I feel that because of the close coordination and cooperation of all agencies there were no fatalities."

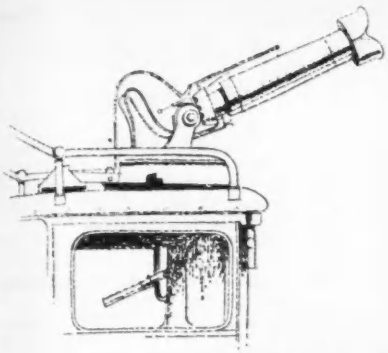
Annual Arson School

THE Second Annual Georgia State Arson School was held at the Atlanta Fire Training Center in April. W. N. Ratcliff, of the Fire Institute, Georgia Institute of Technology, reports a total attendance of 152 persons, 53 of whom attended all five days.

Highlights of the program included an automobile burning demonstration by members of the National Automobile Theft Bureau and the total destruction and burning of a six-room frame house by explosive experts from the Army Ordnance Detachment from Fort McPherson in Georgia.

The Atlanta Fire Training Center was also the site of the 29th Annual Fire School, which was held for three days in May. This school featured an officership class conducted by W. Fred Heisler and also covered fire inspection and prevention and firemanship. Over 200 attended the sessions daily.

"I put the fire out myself, so you wasted a trip."



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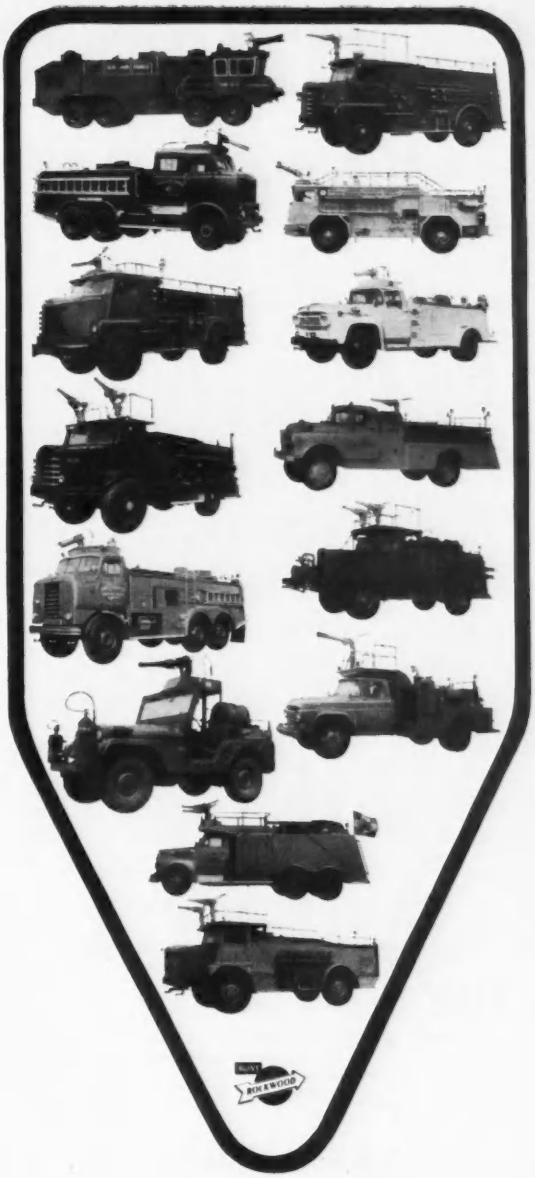
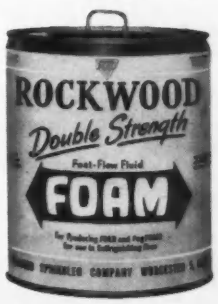


Rockwood specialty FOAM Fire-Truck equipment provides greater fire-fighting punch to meet any situation fast and make manpower more effective! Why? Because it adapts quickly to changing conditions . . . hits harder and faster.

There's volume and versatility to spare in Rockwood turret nozzles. They are immediately adjustable to fight fire four ways: with FogFOAM — Solid FOAM Stream — WaterFOG — Solid Water Stream.

And Rockwood FOAM Fire Truck Proportioning Systems provide close control of FOAM liquid proportioning *automatically* — another vital step in the efficient use of manpower.

Rockwood Handline, Ground-sweep, Under Truck Nozzles and custom designed specialty parts combine to round out the complete line of FOAM equipment . . . the most advanced, most effective tools for fire protection, regardless of your particular needs. For details, write Rockwood Sprinkler Company, Portable Fire Protection Department, 420 Harlow Street, Worcester 5, Mass. Distributors in all principal cities. Rockwood Sprinkler Company, A Division of The Gamewell Company, A Subsidiary of E.W. Bliss Company. *Rockwood engineers water . . . to cut fire losses.*



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Saves valuable space. Holds 1,800 ft. of 2½" hose — proportionately more of 1½" — in an 8 ft. space (when loading table is detached). Roll it right up to the truck for reloading — out of the way when not in use. Equipped with locking fiber-wheeled casters.

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Firemen's Training in the Months Ahead

Alabama: A three-day Fire Prevention Conference will be held in August, and an Arson Investigation Conference is scheduled for October 30–November 3. Write W. L. Rickard, P. O. Box 2847, University.

Arizona: The 9th Annual Arizona Fire Training School will be held at Phoenix College, Phoenix, October 19–21. Contact Assistant Chief Jake Siken, director, Phoenix Fire Department, 49 South First Street, Phoenix 4.

Arkansas: An Instructors' Conference will be held at the State Capitol, July 17–21. Two-week regional training schools will be conducted in 17 regions through November 30. For details write W. A. Turner, Education Building, State Capitol, Little Rock.

British Columbia: The British Columbia Fire Chiefs' Association will hold an Annual Fire College at Penticton, August 22–25. For details write Deputy Fire Marshal H. K. Jenns, secretary, 411 Dunsmuir Street, Vancouver.

California: A Fire Prevention Seminar is planned for July 17–21 at the University of California in Berkeley. For details write Thomas S. Ward, 721 Capitol Avenue, Sacramento 14.

Colorado: The 44th Anniversary, Convention-Fire College and Tournament, of the Colorado State Firemen's Association will be held in Salida, June 21–24. Contact Art Becker, secretary, 2224 South Stuart Street, Denver 19.

Florida: Resident training classes will be conducted at Florida State Fire College each week in September, and October 2–6. Other special classes and conferences to be held at the College include: Fire Pump Maintenance, June 19–23 (Seagrave Fire Pump) and June 26–30 (Hale Fire Pump); and Fire Alarm and Communication Systems, July 17–21. A Seminar in Arson Investigation and Detection will be held August 7–11 at the Cherry Plaza Hotel, Orlando. For details write W. H. Barnett, Superintendent, Florida State Fire College, P. O. Box 785, Ocala.

Indiana: The 28th Indiana State Fire School will be held September 13–16 at Purdue University, which will also be the site for the 4th annual Fire Inspectors' Course, October 30–November 3. Contact Professor Shelby Gallien, Director, Public Safety Institute, Purdue University, Lafayette.

Iowa: Iowa State University will be the site of the Annual Fire Department Inspectors' Short Course, August 1–4. For details write Keith Royer, Supervisor, Firemanship Training, c/o Engineering Extension, 110 Marston Hall, Iowa State University, Ames.

Kansas: The Kansas State Fire School will be held October 23–26. For details write Clyde A. Babb, Director, Kansas State Fire School, 111 Fraser, Lawrence.

Maryland: The following short courses are scheduled at the Fire Service Extension Department, University of Maryland: Hydraulics Short Course, July 10–12; Aerial Ladder Short Course, August 7–9; and 28th Annual Short Course for Firemen, Septem-

ber 5–8. For details write Robert C. Byrus, Box 85, College Park.

Michigan: The 33rd annual Michigan Fire College will be held June 20–23 at the Civil Defense and Disaster Training Center, University of Michigan. Other training activities include classes in Basic Firemanship Training, July 17–21, September 18–22 and October 16–20, and classes for Fire Department Officers, July 24–28 and September 25–29. Contact Francis Hartman, Supervisor, Firemanship Training, Civil Defense and Disaster Training Center, North Campus, University of Michigan, Ann Arbor.

New Hampshire: The New Hampshire State Fire School will be held August 26, 27 at the Training Center of the Meadowood County Area Fire Department, Fitzwilliam. Contact Chief Donald Holbrook, Meadowood County Area Fire Department.

New Jersey: The Fall training session of the New Jersey State Fire College will be held two weekends in September at Sea Girt, and an Officers' Course will be conducted one weekend in December at Seaside Heights. For details write New Jersey State Safety Council, 24 Branford Place, Newark 2.

New Mexico: The 6th annual New Mexico State Fire Marshal's Fire Protection Conference will be held August 14–16 at New Mexico State University, Las Cruces. Contact John B. Woodall, Deputy State Fire Marshal, Post Office Drawer 311, Santa Fe.

New York: The 13th Annual Fire Instructors' Conference will be held in Poughkeepsie, September 10–15. Contact George H. Proper, Jr., Acting Director, Division of Fire Safety, State of New York, 155 Washington Avenue, Albany 10.

Ontario: The province of Ontario will conduct the following courses in 1961: Advanced Fire Inspection Practices Course Part II, June 19–30; Pump Course, July 10–21; Company Officers' Course Part I, July 24–August 4; Fire Department Instructors' Course Part I, August 14–18, Part II, August 21–September 1; Radiological Monitoring Course, September 11–15; Volunteer Fire Officers' Course Part I, September 18–22; Pump Course, September 25–October 6; Basic Fire Inspection Practices Course, October 16–20, and Mutual Fire Aid Forum — County Fire Co-ordinators, October 23–27. Contact D. E. Barrett, Director, Ontario Fire College, Box 830, Gravenhurst.

Pennsylvania: The 23rd Annual State Fire School will be held August 14–18, and a three-day course for potential fire service instructors will be held August 21–23 at Pennsylvania State Fire School. Resident 5-day classes will be conducted in cycles April 10–November 17. For details write Art Espey, Director, Pennsylvania Fire School, Box 631, Lewistown.

Tennessee: The 18th annual Tennessee State Fire Service School will be held August 21–25 at the Fire Training Center, Middle Tennessee State College, Murfreesboro. For details write Homer S. Elkins, Director of State Fire Service School, Trade and Industrial Education, 115 Cordell Hull Building, Nashville 3.

Texas: The 32nd Annual Texas Firemen's Training School will be held July 23–28 at Texas A&M College, College Station. For details write Henry D. Smith, Texas Firemen's Training School, College Station.

Virginia: The Annual Williamsburg Fire College will be held June 23–25. For details write Elliott W. Jayne, Director, Williamsburg Fire Department.

West Virginia: The 31st Annual State Fire School will be conducted July 24–28 at West Virginia University. For details write R. E. Hanna, Jr., Director, School of Mines, West Virginia University, Morgantown.

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Case Study J–652*

And down goes the damage with a Super Vac Smoke Ejector

The weather was freezing cold* the afternoon of January 24th when a Pennsylvania fire squad answered the call of a sporting goods store fire. The stockroom had been ablaze three hours before discovery. Attack was made initially from front and rear of store *but was impossible even with masks,* so dense was the smoke. A Super Vac Smoke Ejector, in use with the B . . . Fire Company only one month, was put into immediate operation. Alarms were sent in for additional Smoke Ejectors. The super vacuum effect of the propeller blades sucked out the smoke, permitting the fire squad to *see and fight the fire.*

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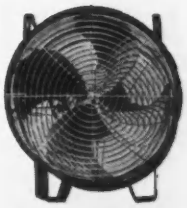

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FIRE SERVICE MEETINGS

JUNE

California:

JUNE 16: Marin County Association of Fire Departments, monthly meeting, Kentfield. Contact W. H. Lane, secretary, 74 Vendola Drive, San Rafael.

Colorado:

JUNE 21–24: Colorado State Firemen's Association, 44th annual convention, tournament and fire school, Salida. Contact Arthur J. Becker, secretary, 2224 South Stuart Street, Denver 19.

Delaware:

JUNE 21: Kent County Volunteer Firemen's Association, monthly meeting, Marydel. Contact P. B. Smith, secretary, Marydel.

JUNE 27: Sussex County Volunteer Firemen's Association, monthly meeting, Frankford Volunteer Fire Company. Contact W. J. Quillen, secretary, Ocean View.

Missouri:

JUNE 23: West Central Missouri Firemen's Association, monthly meeting, Gladstone. Contact Harvey Dunn, president, Harrisonville.

New England:

JUNE 19: New England Division, International Association of Fire Chiefs, Wentworth-by-the-Sea, Portsmouth, New Hampshire. Contact Walter R. Messer, secretary, Keene, New Hampshire.

JUNE 19–22: New England Association of Fire Chiefs, 39th annual conference, Wentworth-by-the-Sea, Portsmouth New Hampshire. Contact A. W. Kimball, secretary, 25 Leavitt Street, Hingham, Massachusetts.

New Jersey:

JUNE 20: New Jersey State Firemen's Advisory Council, meeting, Fort Dix. Contact Luther S. Clark, Jr., secretary, Wood Road, Morristown.

New York:

JUNE 16, 17: Southern New York Volunteer Firemen's Association, Great Neck.

JUNE 19: Chenango County Firemen's Association, regular meeting, De Ruyter. Contact C. J. Gardner, Jr., Mount Upton.

JUNE 22–24: Northern Central New York Volunteer Firemen's Association, Clyde.

North Carolina:

JUNE 21: Sandhill Firemen's Association, annual convention, Pembroke. Contact H. R. Holt, president, Box 695, Troy.

Ohio:

JUNE 24: Central Western Firemen's Association, 31st annual conference, Spencerville. Contact Chief Kent Shoemaker, Oxford Fire Department, Oxford.

JUNE 29: Stark County Firemen's Association, regular meeting, Brewster. Contact Gene Kay, 2036 29th Street, N.E., Canton 5.

Oregon:

JUNE 19: Clackamas County Firemen's Association, regular meeting. Contact Walter Wickline, 2137 S.E. 5th Avenue, West Linn.

JUNE 21: Central Willamette Fire Fighters' Association, regular meeting. Contact E. J. Bell, secretary, Stayton.

JUNE 21: Washington and Columbia County Firemen's Association, regular meeting, Banks. Contact Captain J. J. Kust, 12930 N.W. Cornell Road, Portland 10.

JUNE 25–28: Oregon Rural Fire Protection District Association, annual conference, Bend. Contact Host Chief W. C. Ted Miller, Four Corners Fire Department, 3810 State Street, Salem.

JUNE 30: Polk-Yamhill Firemen's Association, monthly meeting, Monmouth. Contact Glenn Wick, secretary, 209 Hayter Street, Dallas.

Pennsylvania:

JUNE 15–17: Eastern Division, International Association of Fire Chiefs, Hotel DePont, Wilmington. Contact E. J. Clark, secretary, Box 328, Wayne.

JUNE 16: Four County Firemen's Association, annual meeting, Fullerton. Contact J. E. H. Ludwig, 629 2nd Street, Fullerton.

JUNE 17: Western Pennsylvania Firemen's Association, monthly meeting, Meyersdale. Contact Edward Clawson, secretary, 701 Fourth Avenue, New Kensington.

JUNE 18–24: Allegheny County Volunteer Firemen's Association, annual convention week at Rankin-Braddock; Memorial Services, Sunday, June 18; annual election and meeting, Friday, June 23; convention parade, Saturday, June 24. Contact A. H. Leek, secretary, P.O. Box 106, McKees Rocks.

JUNE 20: Perry County Firemen's Association, regular meeting, Newport. Contact Frank L. Fry, secretary, New Bloomfield.

Rhode Island:

JUNE 28: Pawtuxet Valley Firemen's League, regular meeting, Tiogue Volunteer Fire Company. Contact E. F. Fiske, secretary, 34 Pleasant Street, West Warwick.

Saskatchewan:

JUNE 19–21: Saskatchewan Association of Fire Chiefs, annual conference, Regina. Contact F. O. Howard, secretary, Fire Department, Regina.

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South Carolina:

JUNE 18–20: South Carolina State Firemen's Association, annual convention, Charleston. Contact Chief F. C. Shokes, Fire Headquarters, Charleston.

Virginia:

JUNE 16, 17: State Fire Chiefs' Association of Virginia, annual convention, Natural Bridge Hotel, Natural Bridge. Contact H. I. Baumes, Secretary, 905 Travelers Building, Richmond 19.

JUNE 23, 24: Southwest Virginia Firemen's Association, annual convention, Christiansburg. Contact Frank Hubble, secretary, Salem Fire Department.

Washington:

JUNE 21–24: Washington State Firemen's Association, annual conference, Richland. Contact Chief P. J. Quane, chairman, Richland Fire Department.

JULY

Florida:

JULY 13: Lake County Firemen's Association, regular meeting, Mascotte. Contact John Jackson, secretary, Umatilla.

Michigan:

JULY 10–12: Michigan State Fire Chiefs' Association, 36th annual conference, Muskegon. Contact Edward F. Klecka, Jr., 1102 Ruddiman Avenue, North Muskegon.

New York:

JULY 7: Broome County Firemen's Association, Inc., regular meeting, Chenango Bridge. Contact Glenn Fuller, secretary, Box 79, Port Crane.

JULY 12: Steuben County Firemen's Association, Inc., annual convention, Wayland. Contact T. L. Burbridge, R No. 1, Hornell.

JULY 13: Volunteer Firemen's Association of Madison County, regular meeting, Cazenovia. Contact Donald Burke, secretary, 51 Fenner Street, Cazenovia.

JULY 13: Tioga County Firemen's Association, Inc., regular meeting, Van Etten. Contact R. Franklin Ogden, secretary, Box 411, Newark Valley.

JULY 13: Mid-Hudson-Harlem Valley Fire Chiefs' Association, Inc., regular meeting, LaGrange No. 2 Fire Co., Lagrangeville. Contact Dick Kennedy, Box 18, Glenham.

JULY 13–15: Central New York Volunteer Firemen's Association, annual meeting, Endicott. Contact C. B. Parkhurst, 112 Keeler Avenue, Endicott.

JULY 14: Rockland County Volunteer Firemen's Association, Inc., regular meeting, Garnerville. Contact Merle Blauvelt, secretary, 140 Fifth Avenue, Nyack 8.

JULY 14–15: Dutchess County Volunteer Firemen's Association, annual convention, Beacon. Contact Albert Belle Isle, secretary, Box 725, Glenham.

Ohio:

JULY 6: Tri-County Volunteer Firemen's Association, regular meeting, Pleasant Hill. Contact Charles W. Luyster, Piedmont.

JULY 11: Summit County Firemen's Association, regular meeting, Richfield. Contact Harry Harris, 998 Kubler Street, Akron 12.

JULY 13–15: Ohio Fire Chiefs' Annual Conference, Cincinnati. Contact Chief Dan Vogel, Host, Cincinnati Fire Department.

Pennsylvania:

JULY 3: Adams County Firemen's Association, regular meeting, Greenmount. Contact Donald C. Sneeringer, recording secretary, R. D. 4, Hanover.

JULY 14–15: Fayette County Firemen's Association, annual convention. Write Fred R. Gustafson, P.O. Box 126, Connellsville.

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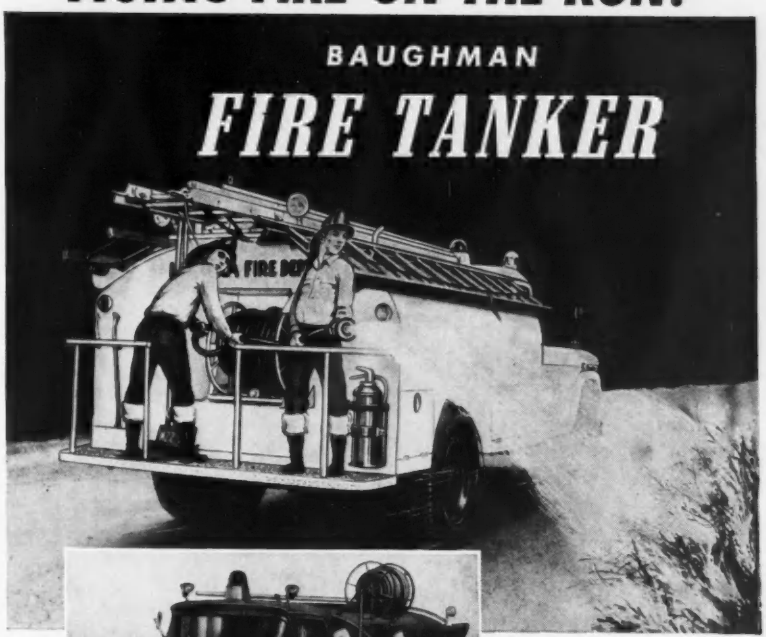

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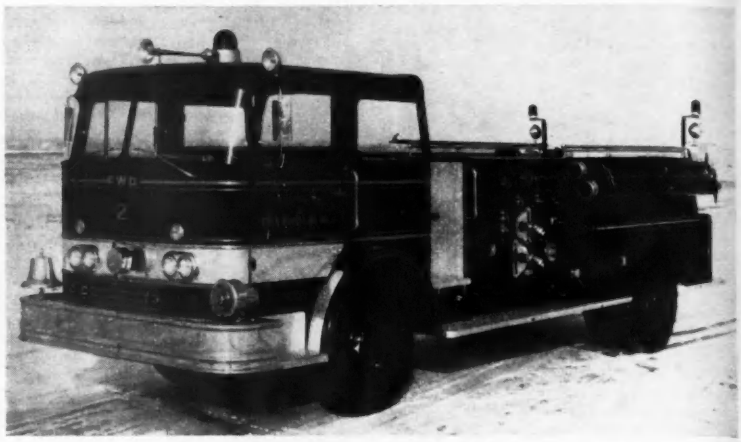
Item	Page
Air compressors	22
Alarm systems	4
Apparatus	20, 31
Apparatus, rescue	3
Back-pack pumps	26
Badges	27
Electronic Sparky	26
Films	26
Fire alarms	29
Foam	23
Helmets	24
Hose couplings	5
Hose dryers, storage	24
Hose reels	19
Hydrants	6
Jewelry, fire fighters'	29
Laundry dryers	21
Pumps	2
Pumps, back-pack	26
Signs	29
Smoke ejectors	25
Sparky gifts	29
Suspenders	29
Tank trucks	27

INDEX TO ADVERTISERS

	Page
Akron Brass Manufacturing Company	5
American District Telegraph Company (ADT)	4
American Film Producers	26
American Fire Pump Company	2
Baughman Manufacturing Company	27
Cairns & Brother, Inc.	24
Circul-Air Corporation	24
Cook Machinery Company, Inc.	21
Cornelius Company	22
W. S. Darley & Company	20
Falcon Alarm Company, Inc.	29
Gerstenslager Company	3
Clifford B. Hannay & Son, Inc.	19
Hook-Fast Specialties, Inc.	29
E. B. Lane	29
Linmar Products	29
Mack Trucks, Inc.	31
Mueller Company	6
Nielsen-Rionda, Inc.	27
Roberts Company	26, 29
Rockwood Sprinkler Company	23
D. B. Smith & Company	26
Super Vacuum Manufacturing Company, Inc.	25

this month's News and New Products



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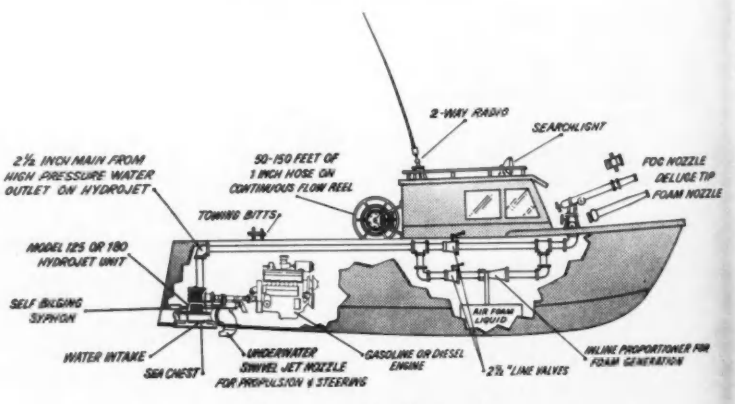
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Here is a new manual of vital interest and usefulness to everyone concerned with the purchase, operation, tactical use and maintenance of aerial ladder trucks. It has been specially written and edited for fire chiefs and fire department training officers but copies should be available for reference by every member of aerial ladder companies in U. S. fire departments.

For the first time, this book brings together details of the functions of six different makes of aerial ladders constructed by the major manufacturers in the United States. It also describes the important fundamentals of operation and use of this valuable apparatus, from the basic familiarization training to the many tactical operations on the fire ground. Three chapters near the end of the book are of primary importance for fire chiefs, master mechanics and other fire officers who are responsible for the purchase, maintenance and periodic testing of such apparatus.

The table of contents at right summarizes the topics covered in this important new manual. Pictures and sketches are included throughout the text to emphasize certain features of the apparatus and methods of operation.

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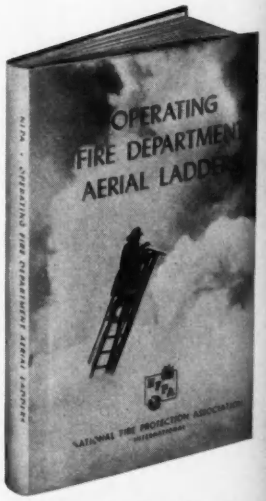

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TABLE OF CONTENTS

Chapter

1. History of the Aerial Ladder
2. Familiarization with Your Aerial Ladder
   Familiarization Chart for Aerial Ladder
3. Factors Involved in Aerial Ladder Operation
4. Stabilizing the Truck
5. Operating Procedures
6. Operating Specific Makes and Types of Aerial Ladders
   a. American LaFrance Aerial Ladder
   b. Mack Truck Corporation Aerial Ladder
   c. Magirus Turntable Ladder
   d. Maxim Motor Company Aerial Ladder
   e. Peter Pirsch and Sons Company Aerial Ladder
   f. Seagrave Corporation Aerial Ladder
7. Operating Under Unfavorable Conditions
8. Safety Precautions for Operating Aerial Ladders
9. The Tillerman's Job
10. Reach of Aerial Ladders
11. Reach of Wall and Roof Ladders
12. Using Ladder Pipes
13. Standard Ladder Pipe Streams
14. Pressures Required for Good Ladder Pipe Streams
15. Using Siamese on Ladder Pipe
16. Full Capacity from Ladder Pipe Using Two Pumpers
17. Tests of Ladder Pipes
18. Tests of Large Capacity Spray Nozzles
19. Duties of Ladder Companies
20. Recording Work of Aerial Ladders
21. Buying an Aerial Ladder
22. Preventive Maintenance for Aerial Ladders
23. Testing Aerial Ladders
24. Glossary

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